

Fall 1969

1969-1970 Xavier University College of Business Administration, College of Arts and Sciences, Evening College, Graduate School

Xavier University, Cincinnati, OH

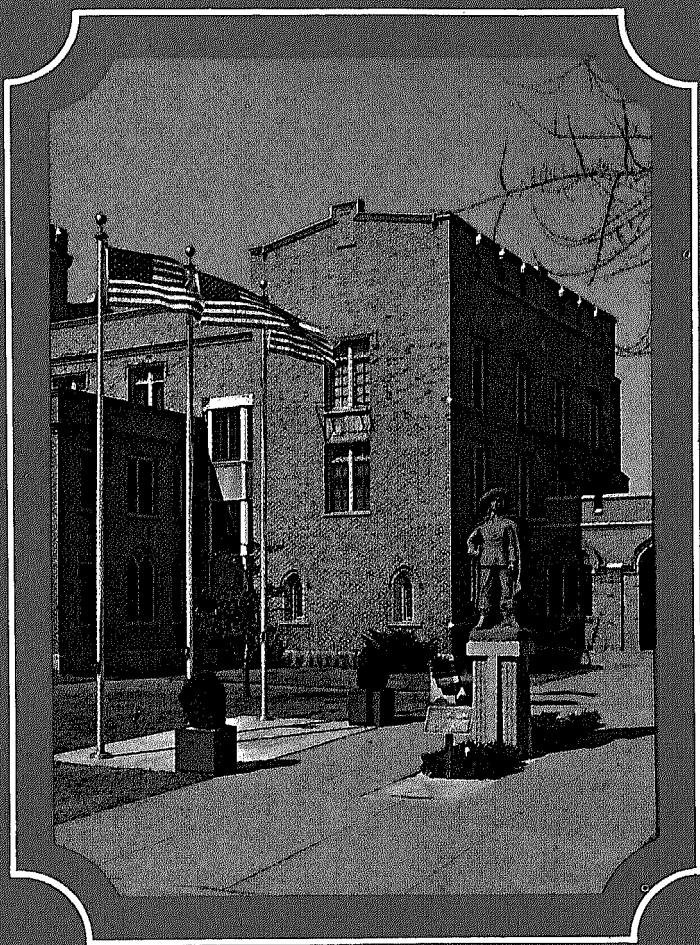
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Catalogue 1969-1970



Xavier University

Cincinnati

The College of Business Administration
The College of Arts and Sciences
The Evening College ■ The Graduate School

Suggestions for Obtaining Information

Requests for information should be directed to the officer indicated,
Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

Telephone: (Area 513) 731-2341

Admission blanks and entrance requirements:

Director of Admissions

Alumni affairs:

Executive Director, X. U. Alumni Association

Bulletins and catalogues (undergraduate):

Director of Admissions

Bulletins and catalogues (graduate):

Dean of the Graduate School

Evening College:

Dean of the Evening College

For part-time and after graduation placement:

Director of Placement

Freshman interests:

The Assistant Dean, College of Arts and Sciences,
or the Associate Dean, College of Business
Administration

Graduate study:

Dean of the Graduate School

Guidance Center:

Director of Guidance

Honors Course:

Director of the Honors Course

Housing on campus:

Director of Student Housing

Refunds:

The Bursar

Reservation fees:

Director of Admissions

Room reservations:

Director of Housing

Student health:

Chairman of Student Health Service

Summer Sessions information:

Dean of Summer Sessions

Teachers' certification requirements:

Chairman of the Department of Education

Transcripts and certificates of honorable dismissal:

The Registrar

Tuition and payment of bills:

The Bursar

Veterans' education:

Director of Veterans' Education



Xavier University

COEDUCATIONAL



Cincinnati's Jesuit University

Catalogue 1969-1970

The College of Business Administration
The College of Arts and Sciences
The Evening College ■ The Graduate School

Illustrations:

Cover—*The Musketeer D'Artagnan*

Flyleaf—*The Joseph Center for Human Development—Dedicated, December, 1968*

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Information concerning the Evening College is included under programs of the College of Arts and Sciences and the College of Business Administration.

1969

University Calendar, 1969 - 1970

First Semester

JANUARY

			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28	29	30	31		

FEBRUARY

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9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28		

MARCH

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30	31						

APRIL

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MAY

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JUNE

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29	30						

JULY

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AUGUST

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31							

SEPTEMBER

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28	29	30					

OCTOBER

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NOVEMBER

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DECEMBER

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28	29	30	31					

- Sept. 16, Tuesday { Out-of-town freshmen and transfer students report to Director of Housing, 9:00 A.M.-5:00 P.M.
- Sept. 17, Wednesday { Registration of local seniors (94 or more credit hours) { M-Z 9:00-10:15 A.M.
Registration of local juniors (63 to 93 credit hours) { A-L 10:15-11:30 A.M.
Freshmen and transfer students' Orientation begins, 9:00 A.M. All new students, local and out-of-town, are required to attend { A-L 1:00- 2:30 P.M.
{ M-Z 2:30- 3:30 P.M.
- Sept. 18, Thursday { Registration of local sophomores (30 to 62 credit hours) { M-Z 9:00-10:15 A.M.
Registration of freshmen (less than 30 credit hours) { A-L 10:15-11:30 A.M.
alphabetically, as assigned during Orientation, 1:00-4:00 P.M.
- Sept. 19, Friday { Registration of freshmen, as assigned, 9:00-11:30 A.M. and 1:00-3:00 P.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
- Sept. 20, Saturday { Registration, Graduate and Evening, 9:00 A.M.-3:00 P.M.
- Sept. 22, Monday { Registration of out-of-town undergraduate students, 9:00-11:15 A.M. and 1:00-4:00 P.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
- Sept. 23, Tuesday { Instruction begins, undergraduate day college, 8:30 A.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
- Sept. 24, Wednesday { Instruction begins, Graduate School and Evening College
- Sept. 30, Tuesday { Final day of late registration, undergraduate day colleges
- Oct. 1, Wednesday { Mass of the Holy Spirit, 1:30 P.M.; classes as usual
- Oct. 28, Tuesday { Final date for assignment of "W" in undergraduate day colleges
- Nov. 1, Saturday { Feast of All Saints, holyday of obligation; classes as usual
- Nov. 5, Wednesday { Graduate School, Foreign Language Examinations, 8:00 P.M.
- Nov. 8, Saturday { Graduate School, Foreign Language Examinations, 2:00 P.M.
- Nov. 10, Monday { Mid-semester grades due in the undergraduate day and evening colleges
- Nov. 11, Tuesday { Memorial Mass for deceased benefactors, professors, alumni, 1:30 P.M.; classes as usual
- Nov. 26, Wednesday { Thanksgiving recess begins, 4:00 P.M., all divisions
- Dec. 1, Monday { Classes resume, 8:30 A.M., all divisions

1970

JANUARY

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FEBRUARY

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MARCH

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29 30 31

APRIL

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MAY

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24 25 26 27 28 29 30
31

JUNE

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28 29 30

JULY

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AUGUST

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30 31

SEPTEMBER

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OCTOBER

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NOVEMBER

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22 23 24 25 26 27 28
29 30

DECEMBER

6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

- Dec. 2, Tuesday through Dec. 16, Tuesday } Pre-registration, undergraduate day colleges
Dec. 8, Monday } Feast of the Immaculate Conception, a holyday of obligation; no classes before 4:00 P.M.
Dec. 19, Friday } Final date for withdrawal from courses
Dec. 20, Saturday } Christmas vacation begins after last class

1970

- Jan. 5, Monday } Classes resume, 8:30 A.M., all colleges
Jan. 9, Friday } Final date for submission of theses, first semester, undergraduate day colleges
Jan. 10, Saturday } Senior comprehensive examinations: M.Ed. and M.B.A., 1:30 P.M.
Jan. 19, Monday through Jan. 24, Saturday } Semester examinations, all colleges
Jan. 24, Saturday } End of first semester, all colleges
Jan. 26, Monday through Jan. 28, Wednesday } First major retreat; open to all students

Second Semester

- Jan. 29, Thursday } Registration of local seniors { A-L 9:00-10:15 A.M. (94 or more credit hours) } M-Z 10:15-11:30 A.M.
Registration of local juniors { M-Z 1:00- 2:30 P.M. (63 to 93 credit hours) } A-L 2:30- 3:30 P.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
Jan. 30, Friday } Registration of local sophomores { A-L 9:00-10:15 A.M. (30 to 62 credit hours) } M-Z 10:15-11:30 A.M.
Registration of local freshmen { A-L 1:00-2:30 P.M. (less than 30 credit hours) } M-Z 2:30-3:30 P.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
Jan. 31, Saturday } Registration, Graduate and Evening, 9:00 A.M.-3:00 P.M.
Feb. 2, Monday } Registration of out-of-town undergraduate students, 9:00-11:15 A.M. and 1:00-4:00 P.M.
Registration, Graduate and Evening, 6:30-9:00 P.M.
Feb. 3, Tuesday } Instruction begins 8:30 A.M., all colleges
Feb. 10, Tuesday } Final day of late registration, undergraduate day colleges
Mar. 2, Monday } President's Day; no classes before 4:00 P.M.
Mar. 10, Tuesday } Final date for assignment of "W" in undergraduate day colleges
Mar. 20, Friday } Final date for filing application for degrees to be granted in June
Mar. 21, Saturday } Graduate School, Foreign Language Examinations, 2:00 P.M.
Mar. 24, Tuesday } Mid-semester grades due, undergraduate day and evening colleges

Mar. 25, Wednesday	{ Easter recess begins after last class, all colleges
Mar. 26, Thursday	{ Second major retreat
through Mar. 28, Saturday	
Apr. 2, Thursday	{ Classes resume, Graduate and Evening Colleges
Apr. 6, Monday	{ Classes resume, 8:30 A.M., undergraduate day colleges
Apr. 24, Friday	{ Final date for withdrawal from courses
Apr. 28, Tuesday	{ Graduate Record Examinations
May 1, Friday	{ Pre-registration, undergraduate day colleges
through May 14, Thursday	
May 2, Saturday	{ Senior Comprehensive Examinations
May 4, Monday	{ Honors Convocation
May 7, Thursday	{ Ascension Thursday, holyday of obligation, no classes before 4:00 P.M.
May 9, Saturday	{ Senior comprehensive examinations; M.Ed. and M.B.A., 1:30 P.M.
May 11, Monday	{ Final date for submission of senior theses
May 19, Tuesday	{ Semester examinations, Graduate and Evening Colleges
through May 25, Monday	
May 25, Monday	{ Semester examinations, undergraduate day colleges
through May 29, Friday	
May 29, Friday	{ Second semester ends
June 3, Wednesday	{ Commencement exercises

Summer Sessions, 1970

June 15, Monday	{ Intersession
through June 20, Saturday	
June 22, Monday	{ First summer session begins, all colleges
June 27, Saturday	{ Graduate School, Foreign Language Examinations, 2:00 P.M.
July 16, Thursday	{ Comprehensive examinations; M.Ed. and M.B.A., 1:30 P.M.
July 25, Saturday	{ Graduate School, Foreign Language Examinations, 2:00 P.M.
July 31, Friday	{ First summer session ends, all colleges
Aug. 3, Monday	{ Second summer session begins
Aug. 29, Saturday	{ Graduate School, Foreign Language Examinations, 2:00 P.M.
Aug. 31, Monday	{ Comprehensive examinations; M.Ed. and M.B.A., 1:30 P.M.
Sept. 4, Friday	{ Second summer session ends



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UNDERGRADUATE STUDIES ABROAD. Mr. Leonard.

Members of the Faculty—1968-1969

The year mentioned in parenthesis is the date of appointment.

EMILY ADLER, A.B., M.A., (1968)

Instructor in Modern Language

JAMES ALLAIRE, A.B., M.A., Ph.L. (1967)

Instructor in Philosophy

ALBERT F. ANDERSON, B.S., M.Ed., Ed.D. (1963)

Associate Professor of Education

EDWARD J. ARLINGHAUS, B.B.A., M.B.A. (1960)

Associate Professor of Business Administration; Director, Graduate Program in Hospital Administration

WILLIAM ARMEL, B.S., M.A. (1968)

Lecturer in Mathematics

ROBERT ASHMORE, Ph.B., Ph.L., Ph.D. (1966)

Assistant Professor of Philosophy

GUSTAVE K. BAHR, JR., B.S., M.S., Ph.D. (1965)

Lecturer in Physics

WILLIAM C. BECKER, B.S., M.Ed. (1967)

Lecturer in Communication Arts and Education

WALTER F. BEHLER, B.S. in B.A., M.B.A., C.P.A. (1949)

Associate Professor of Accounting

ALFRED BEIGEL, A.B., M.A., Ph.D. (1967)

Associate Professor of Modern Language

ROBERT G. BENKERT, M.Ed. (1958)

Lecturer in Business Administration

REV. LEE J. BENNISH, S.J., Litt.B., Ph.L., S.T.L., M.A., Ph.D. (1967)

Assistant Professor of History and Political Science

DAVID BESCO, B.S., M.S. (1967)

Lecturer in Mathematics

REV. CLIFFORD S. BESSE, S.J., A.B., Ph.D. (1952)

Professor of Economics; Assistant Dean, College of Arts and Sciences

VYTAUTAS J. BIELIAUSKAS, A.B., M.A., Ph.D. (1958)

Professor of Psychology; Chairman, Department of Psychology

WADDELL A. BIGGART, B.S., Ph.D., J.D. (1968)

Lecturer in Chemistry

KENNETH BISHOP, B.S., M.Ed. (1966)

Lecturer in Education

WILLIAM D. BOLSEN, B.Ed., M.Ed. (1966)

Lecturer in Education

JOSEPH E. BOURGEOIS, A.B., M.A., Ph.D. (1945)

Professor of Modern Languages; Chairman, Department of Modern Languages

DOROTHY BOWER, M.Ed. (1967)

Montessori Directress

REV. EDWARD A. BRADLEY, S.J., A.B., M.S. (1957)

Associate Professor of Physics

ROBERT BREYER, B.S. (1968)

Lecturer in Management

JESSE BROWN, B.S., M.B.A.

Professor Emeritus of Business Administration

MARTIN BROWN, A.B., M.S. (1966)

Lecturer in Mathematics

REV. EDWARD B. BRUEGGEMAN, S.J., M.A., Ph.L., S.T.L., S.T.D. (1962)

Professor of Theology; Chairman, Department of Theology

THOMAS J. BRUGGEMAN, B.S. in Ed., M.S. (1957)

Assistant Professor of Mathematics

W. THOMAS BRYAN, B.S., M.A., Ph.D. (1953)

Professor Emeritus of Business Administration

HAROLD L. BRYANT, B.S., M.A., M.C.P., Ph.D. (1967)

Assistant Professor of Economics and Finance

ANTHONY J. BRYSKI, B.S., M.A., Ph.D. (1966)

Associate Professor of Industrial Relations

VIRGINIA BURBRIDGE, A.B., M.A., Ph.D. (1967)

Assistant Professor of Modern Languages

LOUISE BURKE, B.A., M.A. (1967)

Lecturer in History

REV. EDWARD W. BURKE, S.J., A.B., M.A., Ph.L., S.T.L. (1948)

Assistant Professor of Classical Languages

KENNETH BUSCH, M.S. (1966)

Lecturer in Statistics

S/SGT. JACK D. CAMPBELL (1967)

Instructor in Military Science

REV. J. PETER CAREY, S.J., A.B., M.A. (1969)

Instructor in Education

REV. EDWARD CARTER, S.J., M.A., S.T.D. (1966)

Assistant Professor of Theology

PETER CARUSONE, B.F.A., M.B.A. (1967)

Assistant Professor of Marketing

EUGENE M. CASTILLON, H.A.B., M.A. (1968)

Instructor in English

JAMES L. CENTNER, Ph.B., M.B.A. (1955)

Adjunct Associate Professor of Management

GEORGE CERBUS, A.B., M.S., Ph.D. (1966)

Assistant Professor of Psychology

GEORGE O. CHARRIER, B.S. (1967)

Lecturer in Mathematics

ROBERT F. CISSELL, B.S. in E.E., M.S. (1945)
Associate Professor of Mathematics

LT. COL. WILLIAM K. CLARK, A.B., M.B.A., M.Ed. (1966)
Assistant Professor of Military Science

WALTER J. CLARKE, M.A., Ed.D. (1949)
Professor of Education and Psychology

EDWIN K. CLICKNER, B.S., M.A., Ph.D. (1968)
Associate Professor of Economics

JOHN C. COCKS, Bp.B.S., M.A. (1967)
Associate Professor of Education

ALEXANDER COHEN, B.S., M.S., Ph.D. (1962)
Adjunct Assistant Professor of Psychology

LYNN COHEN, A.B., M.A. (1968)
Lecturer in Psychology

LT. COL. JOHN D. COLEMAN, JR., B.S. (1966)
Assistant Professor of Military Science

THOMAS P. COLLINS, A.B., M.S. (1960)
Lecturer in Mathematics

REV. BRIAN W. CONNOLLY, A.B., M.A., S.T.L., Ph.D. (1961)
Associate Professor of English

MARK CUMMINGS, M.S. (1962)
Adjunct Associate Professor of Mathematics

REV. GEORGE A. CURRAN, S.J., M.A., Ph.L., S.T.L., Ph.D. (1956-1958; 1959)
Professor of Philosophy

ANNE CUSICK, B.S., M.S. (1967)
Laboratory Instructor, Biology

CHARLES J. CUSICK, B.S., M.S., Ph.D. (1955)
Associate Professor of Biology; Chairman, Department of Biology

WILLIAM DAILY, B.S.B.A., M.Ed. (1967)
Lecturer in Education

KATHLEEN DAVIDOFF, A.B., M.A. (1966)
Instructor in Mathematics

JAMES A. DELANEY, B.S., M.S. (1961)
Assistant Professor of Mathematics

ROBERT DINERMAN, A.B., M.A. (1966)
Lecturer in Communication Arts and Psychology

EDWARD A. DOERING, A.B., LL.B., LL.M., S.J.D. (1954)
Assistant Professor of English

RONALD DOLL, A.B. (1968)
Lecturer in Communication Arts

LAWRENCE I. DONNELLY, A.B., Ph.L., M.B.A., Ph.D. (1956)
Associate Professor of Economics; Chairman, Department of Economics and Finance

COL. RICHARD L. DOOLEY, Ph.B., M.B.A. (1940-42; 1965)
Professor of Military Science, Chairman, Department of Military Science

REV. WILLIAM A. DOWD, S.J., A.B., M.A., B.S.S., L.S.S., S.T.D. (1958)
Professor Emeritus of Theology

GEORGE R. DREESE, A.B., M.A., Ph.D. (1966)
Assistant Professor of Economics and Finance

HARVEY A. DUBE, B.S., M.S., Ph.D. (1947)
Professor of Chemistry

MAJ. VIRGIL D. DUERSON, B.S. (1968)
Assistant Professor of Military Science

JOHN E. DUGGAN, B.B.A., M.B.A. (1967)
Lecturer in Accounting

RICHARD E. DUMONT, A.B., B.Ph., M.A., Ph.D. (1963)
Associate Professor of Philosophy

MICHAEL E. DUPRE, A.B., M.A. (1967)
Lecturer in Sociology

WILLIAM DuPREE, B.S., M.Ed. (1968)
Lecturer in History

CECILIA J. DWYER, A.B., M.S.W. (1964)
Lecturer in Sociology

KENNETH D. EBERHARD, A.B., B.D., M.A. (1968)
Assistant Professor of Theology

JOHN EICK, A.B., M.A. (1965)
Assistant Professor of Modern Languages

WILLIAM T. ENGEL, B.S. (1968)
Laboratory Instructor, Chemistry

CAPT. JOHN P. ENO, B.S. (1966)
Assistant Professor of Military Science

ROBERT FARRAR, A.B., M.A. (1966)
Lecturer in Psychology

RONALD FARRELL, A.B., M.A. (1968)
Lecturer in Sociology

RUDOLPH FEIGE, M.A. (Berlin) (1963)
Lecturer in Mathematics

LOUIS A. FELDHAUS, A.B., M.A. (1934)
Associate Professor of English

REV. JOHN N. FELTEN, S.J., A.M., M.A., (Oxon.), S.T.L. (1957)
Associate Professor of Classical Languages; Dean, College of Arts and Sciences

CHARLES D. FEUSS, JR., M.D. (1962)
Professor of Psychology

JOHN L. FINUCAN, B.S.C., C.P.A. (1948)
Lecturer in Accounting

S/MAJ. WILLIAM H. FITCH (1968)
Instructor in Military Science

HILLIARD FJORD, A.B., M.B.A., LL.B. (1966)
Lecturer in Finance

***DAVID C. FLASPOHLER, B.S., M.S.** (1962)
Assistant Professor of Mathematics

REV. LAWRENCE J. FLYNN, S.J., A.B., M.A., Ph.L., S.T.L., Ph.D. (1956)
Associate Professor of Communication Arts; Chairman, Department of Communication Arts

RICHARD FOGG, B.S.E., M.B.A. (1965)
Lecturer in Marketing

REV. DANIEL P. FOLEY, S.J.,
Litt.B., Ph.L., S.T.L., M.A., Ph.D. (1958-1960; 1963)
Associate Professor of Psychology

ERNEST FONTANA, M.A. (1966)
Assistant Professor of English

ROGER A. FORTIN, A.B., M.A. (1966)
Assistant Professor of History

HARRIS N. FORUSZ, B.Arch., M.Arch. (1967)
Lecturer in Communication Arts

FRANK C. FOSTER, A.B., M.A., B.D., Ph.D. (1967)
Lecturer in Sociology

ATHANASIOS P. FOTINIS, A.B., M.A. (1968)
Instructor in Philosophy

JUDITH FRANKEL, B.A., M.A., Ph.D. (1963)
Adjunct Assistant Professor of Psychology

ALBERT M. FREIBERG, A.B., LL.B., M.B.A., D.C.S. (1967)
Adjunct Assistant Professor of Business Administration

JAMES P. GAFFNEY, A.B., M.Ed. (1960-1962; 1965)
Assistant Professor of Education; Assistant to the Dean of the Graduate School

FRANK GALLENSTEIN, B.S., M.S. (1966)
Lecturer in Education

RICHARD J. GARASCIA, B.S., M.S., Ph.D. (1942)
Professor of Chemistry

MARIUS P. GAROFALO, B.S., M.A., Ph.D. (1965)
Adjunct Assistant Professor of Education

LEONARD C. GARTNER, A.B., LL.B. (1946)
Lecturer in Communication Arts and Business Administration

BERNARD A. GENDREAU, A.B., M.A., L.Ph., Ph.D., M.M.S. (1953)
Professor of Philosophy

* On leave, 1968-1970

JAMES GERACI, B.S. (1966)
Lecturer in Economics

JOHN R. GETZ, A.B., M.A. (1968)
Instructor in English

JAMES A. GLENN, A.B., M.A. (1956)
Assistant Professor of English

JAMES P. GLENN, A.B. (1929-1954; 1962)
Assistant Professor of English

RABBI ALBERT A. GOLDMAN, Ph.D. (1966)
Lecturer in Theology

HENRY GOLDMAN, B.S., M.S.B.A. (1968)
Lecturer in Management

EDWARD J. GOODMAN, A.B., M.A., Ph.D. (1950)
Professor of History and Political Science

WILLIAM E. GORDON, B.Com., D.P.A., M.P.A., Ph.D. (1967)
Associate Professor of Economics and Finance

DONALD W. GRACE, Ph.D. (1966)
Lecturer in Mathematics

REV. TECUMSEH X. GRAHAM, A.B., M.A. (1969)
Lecturer in History

JOSEPH GRATHWOHL, B.S.B.A., M.B.A., C.P.A. (1965)
Lecturer in Accounting

J. ALFRED GRATTON, B.B.A., M.B.A. (1957)
Adjunct Associate Professor of Business Administration

MARK A. GREENBERGER, A.B., M.A., J.D. (1967)
Lecturer in Communication Arts

HARRY M. GRILL, A.B., M.A. (1967)
Lecturer in Education

W. JACK GROSSE, B.Sc., M.B.A., J.D. (1967)
Lecturer in Management

RICHARD A. GROSSE, JR., A.B., M.A., M.B.A. (1965)
Assistant Professor of Marketing

RICHARD L. GRUBER, A.B., M.A. (1968)
Instructor in History

DAVID GUSHURST, B.F.A. (1968)
Lecturer in Communication Arts

JOHN W. HAEFELE, A.B., M.S., Ph.D. (1965)
Lecturer in Communication Arts

PAUL H. HAHN, A.B., M.Ed. (1968)
Assistant Professor of Education

THOMAS J. HAILSTONES, B.S., M.A., Ph.D. (1952)
Professor of Economics; Dean, College of Business Administration

SIDNEY W. HALE, B.Sc., M.Ed., P.E.D. (1962)
Associate Professor of Education; Director of Physical Education

THOMAS HANNA, Ph.B., B.Ed., M.Ed., Ed.D. (1950-1951; 1963)
Associate Professor of Education; Assistant Dean, Graduate School

PAUL W. HARKINS, A.B., M.A., Ph.L., Ph.D., LL.D. (1946)
Professor of Classical Languages; Chairman, Department of Classical Languages

JOHN B. HART, B.S., M.S. (1950)
Professor of Physics; Chairman, Department of Physics

THOMAS R. HAUSER, B.S., M.S. (1962)
Lecturer in Chemistry

REV. WALTER A. HAUSER, A.B., M.S., M.S.W. (1968)
Lecturer in Theology

J. KANEY HAYES, A.B., M.A., Ph.D. (1958)
Professor of Business Administration and Economics; Associate Dean, College of Business Administration

STANLEY E. HEDEEN, B.S. (1968)
Instructor in Biology

NEIL R. HEIGHBERGER, B.S., M.A. (1968)
Instructor in History

ANDREW HEISSERER, B.S., M.A. (1968)
Lecturer in History

DAVID T. HELLKAMP, B.S., M.A., Ph.D. (1967)
Assistant Professor of Psychology

ROBERT H. HELMES, B.S., M.A. (1950)
Assistant Professor of Management and Education

ROBERT HERBOLD, B.S., M.S., Ph.D. (1968)
Lecturer in Mathematics

J. DANIEL HESS, B.S., M.B.A. (1968)
Lecturer in Management

REV. WILLIAM P. HETHERINGTON, S.J., Ph.D., S.T.L. (1945)
Professor of Classical Languages; Director of Honors Course

DANIEL J. HIGGINS, B.S., M.S., Ph.D. (1965)
Associate Professor of Biology

ROBERT J. HOGAN, B.S. (1968)
Laboratory Instructor, Chemistry

S/SGT. JACK L. HOLLAND (1968)
Instructor in Military Science

ALVIN HOLMAN, A.B., M.A. (1968)
Lecturer in Modern Languages

ROBERT HONKOMP, B.S., M.S. (1968)
Instructor in Mathematics

REV. LAWRENCE E. ISENECKER, S.J., Litt.B., Ph.L., S.T.L., M.S., Ph.D. (1963)
Assistant Professor of Mathematics

BERNARD JANCO, B.S., M.S., Ph.D. (1968)
Lecturer in Mathematics

MICHAEL J. JANOVIC, B.S.I.M. (1966)
Instructor in Marketing

REV. FRANCIS D. JOHNSON, S.J., A.B., M.A., Ph.D., S.T.L., Ph.L. (1960)
Associate Professor of Political Science

JAMES E. JOHNSON, B.S., M.A., Ph.D. (1968)
Assistant Professor of Psychology

ROBERT G. JOHNSON, B.S., Ph.D. (1954)
Professor of Chemistry; Chairman, Department of Chemistry

ROBERT H. JOHNSTONE, B.S., M.B.A. (1967)
Assistant Professor of Business Administration

BURNHAM B. JONES, B.B.A., M.B.A. (1967)
Lecturer in Finance

S/SGT. LIONEL JONES (1968)
Instructor in Military Science

REV. THOMAS P. KENNEALY, S.J., A.B., M.A., Ph.L. (1964-1966; 1968)
Instructor in Classics and Modern Language

JERRY KESSINGER, B.S., M.A. (1968)
Lecturer in Communication Arts

REV. ALLAN KIRK, S.J., A.B., Ph.L., M.A., S.T.L. (1968)
Lecturer in History

MAJ. PATRICK KIRWIN, B.S.B.A. (1967)
Assistant Professor of Military Science

ALBERT J. KLEE, B.Ch.E., M.Ch.E., M.B.A., M.S. (1960)
Adjunct Associate Professor of Management and Mathematics

SR. MARY GRACE KLEIN, I.H.M., A.B., M.S., Ph.D. (1968)
Associate Professor of Education

ROBERT C. KLEKAMP, B.S., M.B.A. (1957)
Assistant Professor of Management

JOSEPH J. KLINGENBERG, B.S., M.S., Ph.D. (1949)
Professor of Chemistry

JANE KLINGMAN, A.B., M.A., Ph.D. (1968)
Associate Professor of Marketing

MAJ. JOHN J. KOISCH, B.S. (1966)
Assistant Professor of Military Science

M/SGT. JOSEPH KORMANIK (1965-1967; 1968)
Instructor in Military Science

EUGENE R. KOTZ, B.A., M.S. (1967)
Lecturer in Management

EARL J. KRONENBERGER, B.S., M.A., Ph.D. (1962)
Associate Professor of Psychology

OTTO A. KVAPIL, B.S., M.A. (1957)
Assistant Professor of Communication Arts

GLEN A. LaGRANGE, A.B., M.A. (1947)
Associate Professor of Education and Psychology

ATMA P. LALCHANDANI, B.Tech., M.S., Ph.D. (1968)
Lecturer in Mathematics

WILLIAM J. LARKIN III, B.S., M.Ed., M.S., Ph.D. (1957)
Professor of Mathematics; Chairman, Department of Mathematics; Director, Computer Center

ROBERT J. LAVELL, A.B., M.A. (1947)
Professor Emeritus of Education

DAVID A. LAYCOCK, B.S., M.S. (1966)
Laboratory Instructor, Biology

DONALD L. LEONARD, A.B. (1964)
Instructor in Modern Languages

JOSEPH LINK, JR., Ph.B., M.Ed., D.Ed., D.Sc. (Hon.) (1946)
Professor of Economics

REV. MAURICE E. LINK, S.J., Litt.B., M.A. (1947)
Associate Professor of History

WALTER W. LIPPERT, JR., A.B., M.S., Ph.D. (1963)
Assistant Professor of Psychology

GILBERT C. LOZIER, A.B., M.Ph., Ed.D. (1948)
Professor of Education

WALTER LUDMAN, B.S., M.S. (1967)
Lecturer in Mathematics

PAUL C. LUNSFORD, B.S. (1966)
Lecturer in Communication Arts

HARRY R. MALY, B.S.B.A., M.B.A., C.P.A. (1959)
Associate Professor of Accounting

ROBERT E. MANLEY, B.S., M.A., LL.B. (1962)
Adjunct Assistant Professor of Economics

WILLIAM MARCACCIO, B.S., M.S. (1934)
Associate Professor of Physics

ALVIN C. MARRERO, A.B., M.A. (1957)
Assistant Professor of Philosophy

JOHN C. MARTIN, B.Sc., M.Ed. (1966)
Instructor in Education

FRANK MASTRIANNA, B.S., M.A., M.C.P., Ph.D. (1964)
Assistant Professor of Economics

ROY D. MATTHEWS, B.S., M.Ed. (1969)
Lecturer in Education

JOHN G. MAUPIN, B.S., M.A. (1946)
Assistant Professor of Communication Arts

ROSS R. McCABE, JR., A.B., M.A. (1968)
Instructor in Philosophy

RAYMOND F. McCOY, A.B., M.A., B.E., Ed.D. (1945)
Professor of Education; Chairman, Department of Education; Dean, Graduate School

THOMAS J. McCRYSTAL, A.B., M.A., Ph.D. (1967)
Assistant Professor of Psychology

JOHN E. McDAVID, B.S., M.B.A., Ph.D. (1964)
Associate Professor of Marketing; Chairman, Department of Marketing

MARTHA McDERMOTT, B.S. (1967)
Directress, Montessori Class

REV. JOHN A. McEVOY, S.J., M.A., S.T.D., SS.L. (1931-1934; 1965)
Assistant Professor of Theology

LEO F. McMULLIN, A.B., M.B.A. (1956)
Adjunct Associate Professor of Marketing

TERRENCE McNALLY, A.B., M.A., Ph.D. (1968)
Assistant Professor of English

PHILLIP E. McNEIL, B.S., M.A., Ph.D. (1968)
Assistant Professor of Mathematics

REV. ROBERT E. McSWEENEY, A.B., S.T.B., S.T.L. (1968)
Instructor in Theology

FRANK McVAY, B.S.B.A., A.B., B.D., M.Ed., M.A. (1966)
Assistant Professor of History

RICHARD J. MEISTER, M.A., Ph.D. (1965)
Assistant Professor of History

FRANK MERCURIO, A.B., B.S. (1966)
Lecturer in Philosophy

LUIGI MESSINEO, Ph.D. (1967)
Assistant Professor of Chemistry

CHARLES MILLER, B.S., M.A. (1964)
Lecturer in Psychology

RAYMOND E. MILLER, B.S., Ph.D. (1965)
Associate Professor of Physics; Director of Graduate Studies, Department of Physics

IDA MOLINA, B.S., M.A. (1966)
Lecturer in Modern Language

JON MOULTON, A.B., M.A., Ph.D. (1967)
Assistant Professor of Political Science

JOHN L. MUETHING, A.B., LL.B. (1951)
Lecturer in Management

JOHN MUNCH, B.S. (1965)
Laboratory Instructor, Biology

ROBERT J. MURRAY, H.A.B., M.A., Ph.D. (1960)
Associate Professor of Classical Languages

JOHN F. NIEHAUS, B.S., M.S. (1966)
Instructor in Mathematics; Supervisor, Computer Center

JOHN T. NIEHAUS, B.S., M.A. (1967)
Lecturer in Sociology

LORITA NORDSIECK, A.B., M.A. (1968)
Lecturer in Modern Language

REV. JAMES L. O'BRIEN, S.J., Ph.D. (1969)
Assistant Professor of Physics

EDWARD J. O'CONNELL, A.B., M.B.A. (1960)
Adjunct Assistant Professor of Management

REV. EDWARD J. O'CONNOR, S.J., A.B., M.A., S.T.L. (1957)
Assistant Professor of Theology; University Chaplain

RICHARD T. O'NEILL, B.S., M.S., Ph.D. (1959)
Associate Professor of Chemistry

***REV. FRANK M. OPPENHEIM, S.J., A.B., M.A., S.T.L., Ph.D. (1961)**
Associate Professor of Philosophy

MILTON A. PARTRIDGE, Ph.B., M.A., Ed.D. (1966)
Assistant Professor of Education

REV. JOSEPH PENDERGAST, S.J., M.A., Ph.D. (1964)
Associate Professor of Classical Languages; Dean, Milford College

REV. JOSEPH J. PETERS, S.J., S.T.L., M.A., M.S., Ph.D. (1946)
Professor of Biology

GRAHAM F. PETRI, A.B., M.S. (1967)
Instructor in Biology

JOHN V. PETROF, A.B., M.B.A., Ph.D. (1968)
Associate Professor of Marketing

REV. DUSAN PETROVICH, M.A. (1966)
Lecturer in Theology

GEORGE PFEIFFER, A.B. (1968)
Lecturer in Communication Arts

MARK E. PLAGEMAN, A.B., M.A. (1964)
Lecturer in Modern Languages

CHARLES PRITCHETT, B.S. (1968)
Lecturer in Communication Arts

GERALD QUATMAN, A.B., M.A., Ph.D. (1962)
Associate Professor of Psychology

* On leave, 1968-1969

REV. PHILIP F. QUINN, S.J., A.B., M.A. (1967)
Instructor in Theology

AYYANNA RAMINENI, M.A., M.Sc., Ph.D. (1967)
Assistant Professor of Economics and Finance

NEAL RASMUSSEN, M.B.A. (1965)
Lecturer in Business Administration

WILLIAM RENGERING, A.B., M.A. (1968)
Lecturer in Modern Languages

JOHN RETTIG, H.A.B., M.A., Ph.D. (1968)
Assistant Professor of Classics

NICHOLAS RIEDER, B.S., M.A. (1967)
Lecturer in Modern Languages

PAUL J. RIESELMAN, Ph.B., M.A. (1948)
Assistant Professor of Modern Languages

REV. PAUL ROBB, S.J., A.B., Ph.L., M.A., S.T.L., Ph.D. (1968)
Lecturer in Psychology

S.F.C. BENNIE ROBERSON (1967)
Instructor in Military Science

S/SGT. JONATHAN ROCHELLE (1968)
Instructor in Military Science

HILDA ROTHCHILD, A.B., M.A. (1965)
Assistant Professor of Education and Psychology; Supervisor of Montessori Interns

JOHN C. ROTHWELL, B.S.B.A., M.B.A. (1964)
Assistant Professor of Economics and Finance

ROBERT A. RUNDLE, B.S., M.S.W. (1965)
Lecturer in Sociology

SR. MARY JOHN BOSCO RYAN, R.G.S., A.B., M.A., Ph.D. (1961)
Adjunct Associate Professor of Psychology

REV. THOMAS G. SAVAGE, S.J., A.B., A.M., M.A., (Oxon.), Ph.L., S.T.L. (1962)
Associate Professor of English; Chairman, Department of English

DONALD SCHAPPACHER, B.S.B.A., M.B.A., C.P.A. (1967)
Lecturer in Accounting

KENNETH T. SCHEURER, B.S., M.Ed. (1963)
Assistant Professor of Education

IDA SCHICK, A.B., M.A., Ph.D. (1968)
Assistant Professor of Philosophy

THOMAS A. SCHICK, A.B., Ph.L., A.M. (1967)
Lecturer in Philosophy

GEORGE SCHLEGEL, C.P.A. (1960)
Lecturer in Accounting

HANS SCHMIDT, JR., A.B., B.S., M.A., Ph.D. (1967)
Associate Professor of Psychology

REV. ROBERT W. SCHMIDT, S.J., Litt.B., M.A., Ph.L., S.T.L., Ph.D. (1964)
Professor of Philosophy; Chairman, Department of Philosophy

HOWARD G. SCHULTZ, B.S.B.A., M.A., M.Ed., Ph.D. (1957)
Associate Professor of Economics and Finance

ROBERT A. SCHUTZMAN, B.S.B.A., M.B.A., C.P.A. (1964)
Assistant Professor of Accounting

ROMAN J. SCHWEIKERT, A.B., M.A. (1964)
Assistant Professor of Education and English

JACOB W. SCHWEIZER, B.S.B.A., M.B.A., P.A. (1954)
Assistant Professor of Accounting

REV. ALFRED E. SCHWIND, S.J., M.A. (1959)
Assistant Professor of Theology

AUGUST SEHER, A.B., M.A. (1966)
Instructor in History

LAWRENCE W. SELZER, B.S.C., P.A. (1945)
Lecturer in Accounting

NICHOLAS A. SETA, B.S., M.Ed. (1961)
Adjunct Associate Professor of Psychology

JOSEPH H. SETTELMAYER, LL.B. (1945)
Lecturer in Management

W. SAM SHAW, B.S.Ch.E., M.S.I.E., M.B.A. (1963)
Lecturer in Management

THOMAS M. SHEERAN, B.S.B.A., LL.B. (1968)
Lecturer in Industrial Relations

REV. W. EUGENE SHIELS, S.J., A.B., M.A., Ph.D. (1946)
Professor of History

AUDREY SHORT, A.B., M.A., Ph.D. (1968)
Lecturer in History

DAVID A. SIEGFRIED, B.S., M.A. (1967)
Instructor in Communication Arts

PAUL L. SIMON, A.B., M.A., Ph.D. (1963)
Associate Professor of History and Political Science; Chairman, Department of History and Political Science

LT. COL. JOHN G. SISAK, A.B. (1966)
Assistant Professor of Military Science

JAMES B. SMART, B.S., M.S., Ph.D. (1967)
Assistant Professor of Chemistry

DAVID SMITH, B.S., M.S. (1968)
Lecturer in Physics

WILLIAM E. SMITH, B.S. in B.A., M.B.A., M.Ed., P.A. (1956)
Assistant Professor of Accounting

CLARENCE A. SOMMER, B.S., M.A., Ph.D. (1948)
Professor of Education; Director, Teacher Training, Student Teaching, and Placement

ROBERT SPIRTAS, A.B., M.S. (1968)
Lecturer in Business Administration

LOUIS STAUB, A.B. (1968)
Lecturer in Philosophy

ARTHUR B. STEVENSON, B.A., Ph.D. (1965)
Assistant Professor of Psychology

MAJ. PHILLIP R. STEWART, B.S. (1968)
Assistant Professor of Military Science

ROBERT C. STRUNK, H.A.B., M.S. (1967)
Instructor in Mathematics; Systems Manager, Computer Center

JOSEPH M. SULLIVAN, B.S., M.Ed. (1967)
Instructor in Education

REV. PAUL D. SULLIVAN, S.J., A.B., M.A., Ph.D. (1945)
Professor Emeritus of English

REV. JOSEPH R. SWEENEY, S.J., A.B., Ph.L., M.A., S.T.L. (1966)
Lecturer in Theology

JOHN F. TAFURI, B.S., M.S., Ph.D. (1951)
Professor of Biology

MAJ. LEE W. TESSMER, A.B. (1966)
Assistant Professor of Military Science

REV. THEODORE C. THEPE, S.J., A.B., Ph.L., M.S. (1961)
Assistant Professor of Chemistry

CHARLES THIEMAN, D.B.A. (1965)
Lecturer in Business Administration

ROBERT THIERAUF, B.S.B.A., M.B.A., Ph.D., C.P.A. (1965)
Assistant Professor of Management; Acting Chairman, Department of Management and Industrial Relations

STANLEY G. THOM, B.S., M.Ed. (1968)
Lecturer in Modern Languages

TERRENCE P. TOEPKER, B.S., M.S., M.Ed. (1964)
Instructor in Physics

JOHN TOMLIN, A.B., LL.B. (1967)
Adjunct Assistant Professor of Hospital Administration

REV. HARKER E. TRACY, S.J., A.B., S.T.B., M.A. (1967)
Assistant Professor of Philosophy

REV. JOHN J. TRAINOR, S.J., M.A., Ph.L., S.T.L. (1959-1962; 1963)
Assistant Professor of Psychology

REV. JEROME F. TREACY, S.J., A.B., M.A. (1967)
Assistant Professor of Theology

DORIS TROEGER, A.B., M.A. (1968)
Assistant Professor of Modern Languages

DAVID TRUNNELL, A.B., M.S. (1968)
Instructor in Mathematics

ELMER TUDOR, B.S., M.B.A. (1967)
Lecturer in Management

MATIAS G. VEGA, Ph.D. (1954)
Professor of Modern Languages

REV. ANDREW S. VIRAGH, S.J., S.T.L., Ph.D. (1968)
Professor of Philosophy

REV. THEODORE VITTORIA, B.S., S.T.B., M.A., J.C.L., S.T.L. (1968)
Instructor in Theology

REV. LEO VOLLMAYER, S.J., A.B., M.S. (1942)
Professor of Physics

WESLEY P. VORDENBERG, A.B., M.A., Ph.D. (1965)
Associate Professor of Education

KENNETH C. WAHL, B.S. (1968)
Laboratory Instructor, Chemistry

K. DUANE WAIT, B.S., M.S., Ph.D. (1967)
Lecturer in Mathematics

PETER WEBB, A.B., M.A. (1968)
Assistant Professor of Marketing

KARL P. WENTERSDORF, M.A., Ph.D. (1956)
Professor of English

FREDERICK G. WERNER, A.B., M.A., Ph.D. (1960)
Professor of Physics

MAXWELL WERNER, B.S., M.Ed. (1965)
Adjunct Assistant Professor of Education

JOSEPH H. WESSLING, B.S., M.A. (1964)
Assistant Professor of English

REV. ORRIN T. WHEELER, S.J., Litt.B., Ph.L., S.T.L., S.T.D. (1958)
Assistant Professor of Theology; Associate Registrar

WILLIAM H. WILLER, A.B., M.A., Ph.D. (1946)
Professor of English

HENRY F. WILLIAMS, B.S., M.A., Ph.D. (1968)
Associate Professor of Economics

JAMES A. WILLIAMS, A.B., M.A. (1964)
Lecturer in Geography

RONALD L. WILSON, B.F.A. (1967)
Lecturer in Communication Arts

EDWARD F. WILZ, B.S.B.A., M.B.A., C.P.A. (1954)
Professor of Accounting; Chairman, Department of Accounting

***GEORGE A. WING, B.S.B.A., M.B.A., D.B.A.** (1960)
Associate Professor of Economics and Finance

SR. ROSEMARY WINKELJOHANN, O.S.U., B.S., M.Ed. (1968)
Lecturer in Education

REV. BERNARD J. WUELLNER, S.J., M.A., Ph.D. (1967)
Professor of Philosophy

CATHERINE WULFTANGE, S.N.D., A.B., M.A., Ph.D. (1966)
Associate Professor of Education

COLIN YACKS, B.S., M.Ed. (1966)
Lecturer in Communication Arts

OLEG ZINAM, B.S., M.B.A., Ph.D. (1958)
Lecturer in Modern Languages

HOWARD ZUCKERMAN, A.B., M.B.A. (1968)
Lecturer in Hospital Administration

* On leave, 1967-1969

Graduate Assistants

Chemistry

THEODORE W. DOLZINE B.S.
JAMES V. EVANS, B.S.
ANDREW Z. FURTAK, B.S.
RICHARD J. GRANT, A.B.
CHARLES W. MILLER, B.S.

JAMES L. POECHMAN, A.B.
SAMI V. QAS-ELIAS, A.B.
ELIZABETH A. SMALL, A.B.
JOHN J. SOTERA, B.S.

Economics

J. MICHAEL WALSH, B.S.

English

JAMES F. CAHILL, B.S.
ROBERT W. DUNCAN, B.S.
STEVEN S. FRANCIS, A.B.
STEPHEN R. HUDSON, A.B.

MICHAEL D. KAYNIS, A.B.
WALTER M. KORAL, A.B.
THOMAS A. MEYER, A.B.
MICHAEL QUIGLEY, A.B.

History

MARGUITA BERGMAN, A.B.

Mathematics

J. MICHAEL THIERAUF, B.S.

Physics

WILLIAM H. KUHLMAN, B.S.

Psychology

JOHN J. BEREK, S.J., A.B.
NOBLE W. HARRISON, A.B.
TERRY I. ISHIKAWA, B.S.

(MISS) M. ICIAR LOZANO, A.B.
RONALD A. OLIVER, A.B.
LAURAN H. SANDALS, A.B.

The University

History

Xavier University was founded in 1831 as a literary institute by Edward Dominic Fenwick, of the Order of Preachers, who was the first Bishop of the Diocese of Cincinnati. He called the school The Athenaeum and erected buildings on Sycamore Street in downtown Cincinnati.

In 1840, his successor, Bishop John Baptist Purcell, invited the Jesuits to take over the administration of the school. They arrived on October 1, 1840, and began first classes on October 17. The Jesuits changed the name to Saint Xavier College. In 1919 the College moved to the present site on Victory Parkway in Evanston-Avondale. In 1930 the name was again changed, this time to Xavier University.

Objectives of Xavier University

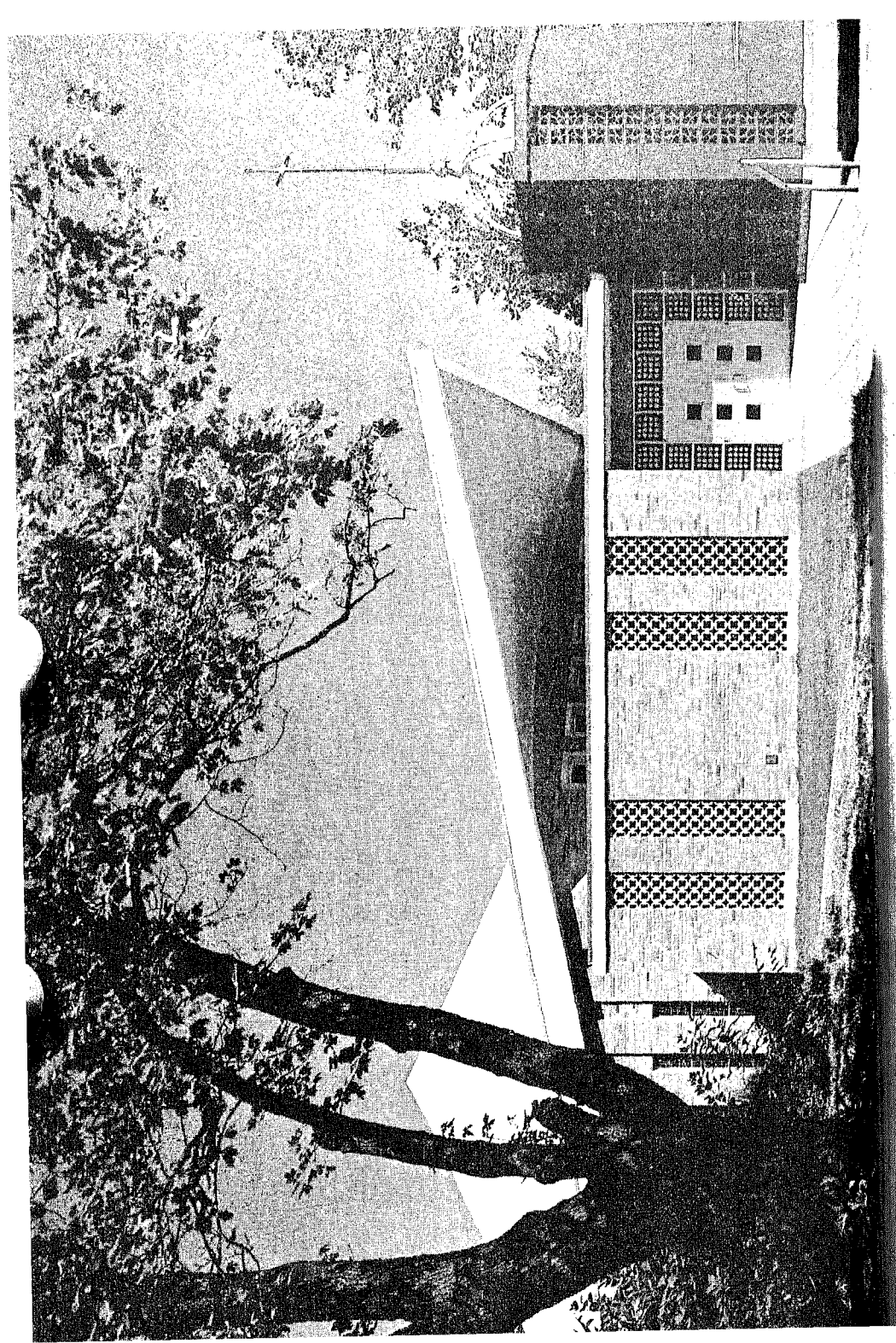
Xavier University is an institution of higher learning set in the worldwide traditions of the Roman Catholic Church and the Jesuit Order and drawing upon the cultural heritage of the Ohio Valley. The teaching of the Church on the nature of man, his origin and destiny, and how he should use and develop his talent is central to the educational philosophy of the University. It subscribes to the expression of Pope Pius XI in his *Christian Education of Youth*, "The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian. . . . The true Christian, product of Christian education, is the supernatural man who thinks, judges and acts constantly in accordance with right reason illumined by the supernatural light of the example and teaching of Christ."

The University strives to foster conditions favorable for intellectual leadership. To this end it strives to impart a superior body of knowledge to its students and to help them acquire power to think clearly and penetratingly. The University wants its graduates to be literate, persons of good taste, frequent and familiar in the use of books, alert, and retentive of significant ideas. These ideals are promoted by curricular and co-curricular activities that contribute to the intellectual, the religious, the moral, and the physical enrichment of its students.

In seeking to fulfill its responsibilities, the University is guided by the principles of the *Ratio Studiorum*. This Jesuit code of liberal education, developed and revised through some four hundred years of experience, stresses the liberally educative value of mathematics and the natural sciences to teach the student to reason about the material universe. It uses language and literature to bring him into contact with new habits of thought and expression to enrich the appreciation of his own culture. History and social studies broaden his knowledge of men and events, and lead to a deeper understanding of his own role in society. And philosophy and theology help integrate the entire program of studies by the insight they afford of the total reality of God's plan for the individual and for society.

Along with general education, the University provides for concentration in special areas of learning. To the extent consonant with its resources, Xavier University fosters scholarly investigation and creative ability so that its members may contribute to mankind's quest for the fullness of truth. Its philosophy of education shapes and directs the curricula and the educational methods of Xavier University. The various programs, those in the natural sciences, business administration and pre-professional education, no less than those in the humanities, give the student a core of required, broadly educative courses so that concentration on special objectives is carried on in the context of liberal education.

In fine, Xavier University regards the development of the intellectual abilities of its students in their pursuit of truth as its specific, primary responsibility. And



it sees itself sharing with the Church, the family, and other social institutions the responsibility for developing the other characteristics of the "true and perfect Christian"—strong moral character, intelligent appreciation of beauty, sound physical health, and appropriate social attitudes and habits. Jesuit education thus prepares its students for eternity as well as for time; for life as well as for vocation.

The College of Arts and Sciences

The College of Arts and Sciences has been traditionally that part of any Jesuit University which most contributes to the Jesuit ideals in higher education. The College in each of its disciplines is convinced of the value of a liberal education, the mark of which is, it has been said, "a combination of skill in analysis and judgment with informed human concern." The College does not, therefore, regard its only role, or even chief role, as the preparation of students for graduate and professional schools. Its goal is to produce this skill in analysis and judgment, this knowledge concerning human things as the substance of its education. The College agrees in emphasizing the notion of concern, which notion implies as well the imparting of a hierarchy of values.

This hierarchy distinguishes the liberal education offered at one college from that obtainable at another. Xavier's College of Arts and Sciences believes that it has something distinctive—something not possessed by non-Catholic and non-Jesuit colleges of Arts and Sciences. If it did not, the College probably would not survive and probably should not survive.

What are its distinctive features? There is, first of all, the conviction that God has a central place in the universe and in the activities of men, that final judgments on human affairs cannot be made without reference to God. There is, secondly, the conviction that a valid objective standard of morality is obtainable by human reason. There is, thirdly, a basic optimism concerning human affairs—an optimism based on the firm belief in God's love for the human race, in the consequent value of the human person, and in the meaningfulness of life. In traditional Jesuit education, *eloquentia* was given strong emphasis. The College will continue to stress excellence in communication in all departments. What will be communicated is not simply communication itself, but its belief, its convictions, its balanced worldview, its desire to understand divine and human things more completely and to stress the need of basing all activity on this understanding.

In common with other colleges which offer a truly liberal education, the College will continue to stress the knowledge of human activity in the past, both within and without the Western Cultural tradition, to furnish a frame of reference for judging the wisdom of present and future actions. Otherwise "informed human concern" would hardly be properly informed.

The College of Business Administration

After operating its business departments for many years as a part of the College of Arts and Sciences, the University established the College of Business Administration on September 1, 1961.

The College of Business Administration conforms to the general principles and objectives of the University in particular, and of Jesuit education in general. It recognizes the indispensability of cultural subjects which motivate the higher powers of the mind and spell the difference between an educated man and a mere technician.

The objectives, therefore, of the College of Business Administration are threefold: 1. To develop the cultural, intellectual, and the moral qualities of the student; 2. To provide a solid undergraduate base for the student who wishes to continue study at the graduate level; 3. To prepare the student in areas of business ad-

ministration so that he is qualified to accept a position of responsibility and leadership in the business community.

Evening College

The purpose of the Evening College is to aid adults of Greater Cincinnati in obtaining a more advanced education by means of courses of cultural and practical value. This division renders particular service to those who wish to carry college work toward a degree while working during the day and to those who wish to pursue subjects which will better fit them for special services or vocations.

In addition to the liberal arts courses, technical and vocational courses are offered. All courses are open to men and women. Besides the individual course offerings, there are groupings and programs of courses leading to certificates, diplomas, and degrees.

The Graduate School

The Graduate School has offered programs leading to graduate degrees since 1947. Degrees conferred are the Master of Arts, the Master of Science, the Master of Education, and the Master of Business Administration. Information about the Graduate School follows the undergraduate section of this Catalogue.

Accreditation

The University is accredited by the North Central Association of Colleges and Secondary Schools as a degree-granting institution, and is approved by the Department of Education of the State of Ohio and by the Board of Regents of the University of the State of New York. It is also approved by the American Chemical Society for its training in chemistry.

Institutional Memberships

The University maintains membership in these educational and learned organizations:

The Jesuit Educational Association; The National Catholic Educational Association; The North Central Association of Colleges and Secondary Schools; The North Central Conference of Summer School Directors; The National Association of College and University Summer Sessions; The American Council on Education; The Association of American Colleges; The Association of Urban Universities; The National Education Association; The Ohio College Association; The Association of University Evening Colleges; The American College Public Relations Association; The American Catholic Philosophical Association; The American Catholic Historical Society of Philadelphia; The American Historical Association; The United States Catholic Historical Society; The Mississippi Valley Historical Association; The Catholic Library Association; The American Library Association; The American Association of Collegiate Registrars; The Association of Ohio College Registrars; The National Association of Student Personnel Administrators; The American Association of Colleges for Teacher Education; The American Mathematical Society; The Association of College Unions; The National Association of College and University Food Services; The National Association of College Stores; The United States Field Artillery Association; The American Political Science Association; The American Association of Collegiate Schools of Business Assembly.

Buildings

The following buildings are used primarily for administration and classroom purposes:

Albers Hall, 1929, is the gift of the late William H. Albers. It contains classrooms, laboratories, and offices of the staff in biology.

The Karl J. Alter Classroom Building, dedicated in 1960 to honor the Archbishop of Cincinnati, contains all major academic administration offices, 32 classrooms, four seminar rooms, faculty and student lounges, and the Schott-Link studios for radio and closed-circuit television. The Edward H. Kelley Lecture Hall seats 322 in theater-type chairs. The building is air-conditioned.

Alumni Hall, 1920, is the gift of the alumni to the University on its diamond jubilee. It contains the Department of Physics, the Geoghegan Memorial Language Laboratory, classrooms, and offices.

The Armory, 1949, houses classrooms, an auditorium, a drill hall, a rifle range, storage rooms, and garages.

Saint Barbara Hall, 1947, is the headquarters of the Reserve Officers' Training Corps.

Boylan Hall commemorates the late Rev. Murtha J. Boylan, S.J., professor of psychology at Xavier for many years. It houses the Assistant to the President and faculty offices.

The Walter Seton Schmidt Building contains offices of the Treasurer and the Bursar, faculty offices, and classrooms.

The McDonald Memorial Library, 1966, is the gift of the Walter A. and George McDonald Foundation in memory of Andrew J. and Mary McDonald. This air-conditioned building seats 700 students. Open shelves have a capacity of 350,000 volumes, and there is a closed stack area in the Schmidt Building for an additional 80,000 volumes. An enclosed garden area provides space for future expansion of the building.

Thomas J. Logan Chemistry Building, 1953, contains the Albert D. Cash Memorial Room, classrooms, offices, and laboratories.

Residence halls:

Brockman Hall, a residence for 300 men, was dedicated in 1955, to the memory of the Very Rev. Hubert F. Brockman, S.J., twenty-fourth president of the University.

Elet Hall, 1924, temporarily houses the Department of Psychology.

Hinkle Hall, the residence of the Jesuit faculty, was erected in 1920 by Mrs. Frederick Wallis Hinkle. It contains the Foss Memorial Chapel.

Husman Men's Residence Hall, erected in 1965, was made possible by a gift from Harry J. Husman in memory of his wife, Edna D. Husman. It provides accommodations for 292 students in four-man suites and is entirely air-conditioned.

Kuhlman Hall, 1967, an air-conditioned high-rise residence for 432 students, stands across from the University Center on Ledgewood Avenue. It honors the late Mr. and Mrs. George H. Kuhlman, and contains the Kappelhoff Chapel, the Griffin Memorial Room, and the McGrath Health Center

Marion Residence, 1942, is especially arranged for individual tutorial guidance of honor students. A special selection of students assures representation in all phases of co-curricular life. Students may live in Marion Hall only by special recommendation.

Rattermann Hall, located at Redway and Dakota Avenues, was bequeathed to Xavier by the late Mrs. Henry C. Rattermann. This large English-style residence provides a limited number of rooms for out-of-town students and also houses the Mermaid Tavern, the campus writers' club.

Other buildings of the University are:

The Field House and Gymnasium, 1928, is the gift of the late Walter S. Schmidt, Class of 1905. In addition to the large indoor stadium, it contains a boxing ring, badminton and handball courts, a basketball court, and shower and locker rooms.

Xavier Stadium, capacity of 15,000, was erected in 1928 through a public drive headed by the Governor of Ohio, the late Myers Y. Cooper.

North Hall, 1947, contains offices of the Department of Classics, the superintendent of buildings and grounds, and the maintenance department.

South Hall, 1947.

The University Center, 1965, combines dining facilities for resident and commuting students, student activity offices, the University Book Store, recreation facilities, a 500-seat theatre, and the offices of the President of the University, the Executive Vice-President, the Vice-President, Student Affairs; the Dean of Men, and the Director of Student Aid and Placement. The Center enjoys a commanding view of both Victory Parkway and the University Mall.

The Milford Novitiate Building, 1925, on a one-hundred acre plot of ground in Milford, Ohio, houses members of the Society of Jesus in residence at the Milford Division of the University.

The Williams Memorial—St. Robert Bellarmine Chapel, 1962, is the gift of the five children of the Charles F. Williams family in honor of their parents. The Chapel, structurally unique in Cincinnati, is sheltered by a saddle-shell roof of reinforced concrete resting on two massive concrete piers. The design provides a maximum of clear floor space for a semi-circular seating arrangement to accommodate 500 worshippers. The Chapel is located at the head of the Mall.

Sycamore House adjoins Elet Hall and serves as headquarters for the University's Public Relations and Development staff.

The Joseph Center for Human Development, 1968, Dana Avenue and Winding Way, houses Psychological Services, counseling activities, and classrooms.

The Mary Manning Walsh House, commemorating Mrs. Walsh's scholarship bequest to the University, houses some Business and Finance offices.

The Symmes Street Studios, used for radio and television instruction by the Department of Communication Arts, formerly were the headquarters of WCPO-TV and Radio.

The Keseg House, 3868 Ledgewood Avenue, houses activities.

The Walker House, 1500 Dana Avenue, houses Hospital Administration offices and the Institute of Business and Community Services.

University Services, Financial Aid, and Organizations

Religious Welfare

Xavier University uses various means of promoting a sincere Catholic way of living in its students. This influence permeates classroom and general campus atmosphere. From the celebration of Mass to a visit in Bellarmine Chapel, student life is vibrant with that simple devotion characteristic of Christian principles.

Each year the Spiritual Exercises of Saint Ignatius Loyola are given for Catholic students. Attendance at the exercises is obligatory for unmarried freshmen and sophomores in the undergraduate day colleges.

Student Health Service

The Student Health Service is the organization through which the University fulfills its obligation to its students for the care of their physical and mental health and at the same time assures itself and the families of these students that a reasonable supervision is being exercised by the institution for the maintenance of physical and mental fitness of the student.

Participation in the Student Health Service is obligatory for day undergraduates. Evening and graduate students may use some of the services.

Health examinations are required for all day students as part of their entrance requirements to Xavier University. Forms for this examination are to be filled out by the family physician and must be in the hands of the medical director of the University before the beginning of the semester in which the applicant enters the University.

Student Guidance

The University strives to give students as much individual attention as possible. Each student is assigned a faculty advisor whose duty it is to assist the student in the planning of his course. The student is expected to have at least one conference in each semester with the advisor.

For spiritual and personal guidance the University provides University Chaplains, who see students according to schedule or by appointment.

Psychological Services Center

The Center provides psychological services for students of Xavier University. It is equipped to handle behavioral problems in a variety of areas such as the choice of studies, of a school, or of an occupation; measurement of aptitudes, interests, abilities, etc.; failures in school or at work; difficulties in reading and unsatisfactory patterns of living. Psychological testing and vocational guidance, psychiatric evaluation, counseling, and psychotherapy are the fundamental services of the Center. Undergraduate full-time students are provided the testing, counseling, and vocational guidance services free, except for a \$5.00 test materials' replacement charge.

The Placement Service

The Placement Service, located in the University Center, offers assistance to seniors, graduate students, and alumni in finding suitable employment commensurate with their education. The office provides occupational materials, placement guides, company literature, the College Placement Annual, other appropriate literature, and counseling service for those seeking career positions.

The Service arranges for representatives of companies and government agencies to interview students on campus, and aids as much as possible in arranging part-time and summer employment to meet the student's financial needs or to provide suitable work experience for his proper development.

Student Housing

Brockman Hall, Husman Hall, Kuhlman Hall, Ratterman Hall, and Marion Residence are equipped to accommodate full-time day male students. Dormitory costs are listed under Fees.

Out-of-town students must live on campus. Exceptions to this regulation are granted by the Director of Housing.

Room reservations for the residence halls will not be held through the summer for students who are on academic probation at the end of the preceding spring term.

Libraries

The University Library, housed in the Walter Seton Schmidt Library Building since 1926, was moved into the new McDonald Memorial Library during 1966.

The Library contains many interesting and valuable collections among which are the Williams Bible Collection; the original manuscripts of Francis J. Finn, S.J.; a fourteenth century vellum manuscript of the sermons of St. John Chrysostom; a fifteenth century antiphonary; several incunabula; letters of Andrew Jackson, Martin Van Buren, and others. Microfilm and microcard readers are available. The total number of volumes is 120,501.

The University has been a constant beneficiary of friends whose contributions have increased the number of volumes. Since 1925 the Booklovers Association has been outstanding in its gifts and contributions.

The Saint Thomas Library, a branch of the University Library, is situated in Milford. A great part of the 40,171 volumes is in the field of English and classical literature.

Art Gallery

The Fine Arts Gallery, located in the Carriage House of Marion Hall, is intended to be a living facility—one that will present works of art available to the University through loans, gifts, and travelling exhibitions. It was opened in the summer of 1966.

Laboratories

The Department of Biology, occupying Albers Hall, is well equipped for teaching undergraduate students the biological sciences. General laboratories are outfitted with compound and stereoscopic microscopes, ample slides and specimens, and fresh- and sea-water aquaria. Other laboratories are maintained for study in anatomy and development, behavior and physiology, plant biology, genetics, microbiology, and ecology. Advanced students use research space at the Albers Biological laboratories, which are particularly well suited for investigations dealing with the electrical activity of the senses, the nervous system, and the hearts of various animals.

The Department has assembled abundant visual aids—models, vertebrate and invertebrate museum specimens, a variety of projectors, and its own library of motion pictures and kodachrome slides. Modern laboratory instrumentation is used in appropriate courses and includes Tectronix oscilloscopes, Grass stimulators, electroencephalographs, and polygraphs; activity recorders, environmental growth chambers, Warburg apparatus, and sterilizing devices.

The Department of Physics has one large general physics laboratory, a newly designed laboratory for advanced physics at the junior level, a newly equipped atomic-nuclear physics laboratory for seniors, an optics laboratory, an analog computer laboratory, and a complete machine shop.

The seismology laboratory, for research in seismology, at present uses some of the facilities of the physics laboratories in addition to office, library and dark room in Fisher Lodge. For the purpose of advancing the science of seismology, Xavier University maintains a first class station and observatory. The station is located on a farm approximately sixteen miles east of the University. It is equipped with three Benioff short-period seismographs that are kept in continuous operation. In addition, an instrument vault situated in the basement of the Schmidt Building serves experimental purposes.

The chemistry laboratories are located in the Logan Chemistry Building. Five large laboratories are devoted to physical, organic, analytical, general inorganic chemistry, and graduate research. There are smaller laboratories for biochemistry, instrumental analysis, and radiochemistry.

The Department of Military Science is adequately equipped for the conduct of both field work and classroom instruction. Since Xavier's ROTC unit specializes in Field Artillery, 105mm howitzers and associated fire direction and survey equipment are on hand. The Department has available models of military equipment for training in map reading, military communications, rifle marksmanship, and military missiles. Indoor instruction is augmented and facilitated by appropriate motion pictures, slides, and graphic training aids. Other facilities include a sixteen-point small-bore firing range, a military affiliate radio station, and an indoor drill and training area in the Armory. Selected senior cadets may participate in the Army Flight Training Program conducted at a civilian Flight Training School.

The *Geoghegan Memorial Language Laboratory*, which was given by Miss Marie Geoghegan as a memorial to her three brothers, William A. Geoghegan, Thomas M. Geoghegan, and J. Paul Geoghegan, is located on the second floor of Alumni Hall. Equipped with thirty booths and eleven program sources, it provides supplementary drill for students who are taking any one of the modern foreign languages.

Computer Center

The University *Computer Center*, located in the Walter Seton Schmidt Building, provides a complete range of services connected with the analysis and processing of data by means of an electronic computer. These services, available to all branches of the University, may be categorized as services meeting University needs in the areas of education, research, and administration.

General computer orientation is available to the student body in lectures and demonstration periods in the Computer Center. Students can write simple FORTRAN programs after this orientation. Interested students and faculty members receive further instruction in programming in seminars offered each semester by the Computer Center staff. Facilities of the Center are also employed as a course supplement by professors in various disciplines.

Faculty and student researchers are also provided analysis, programming, and operating services in support of their projects by the Center. The high speed and accuracy of the computer is invaluable to research involving complex and extended computations.

The Center assists the administrative offices of the University in processing data. The Treasurer's office, the Registrar's office, and the Development office particularly make extensive use of the services of the Center.

The Center has the following equipment to service the computer needs of the University:

IBM 1620 Computer with card input-output and 20,000 digits of core storage
 IBM 1443 High Speed Printer
 Three IBM 1311 Disk Files with four million digits of memory storage
 IBM 407 Accounting Machine
 IBM 085 Collater
 IBM 514 Reproducing Punch
 IBM 557 Interpreter
 IBM 082 Sorter
 Two IBM 026 Key punches
 Two IBM 029 Key punches

SCHOLARSHIPS—FINANCIAL AID

Types of Aid

1. Scholarships.
2. Student Loans.
3. Government Educational Opportunity Grants.
4. The College Work-Study Program.
5. Part-Time Jobs.
6. Summer Employment.

Scholarships

Information on University scholarships is provided by the sources indicated upon request.

1. For Undergraduate, Day Division, Academic Scholarships: The Director of Placement and Student Aid.
2. For Honors Course Scholarships: The Director of the Honors Course.
3. For Evening College Scholarships: The Dean, Evening College.
4. For Graduate Scholarships: The Dean, Graduate School.
5. For Reserve Officer Training Corps Scholarships: The Professor of Military Science.
6. For Athletic Scholarships: The Director of Athletics.
7. For Band Scholarships: The Director, Xavier University Band.

The Procter and Gamble Scholarship

Xavier participates in the Procter and Gamble Scholarship Program. The amount awarded to Xavier for each four-year scholarship covers full tuition and fees plus an allowance for books and supplies. This scholarship, administered by the University, is allocated to the recipient on the basis of his financial need.

The General Motors Scholarship

Xavier participates in the General Motors College Scholarship Plan. The amount awarded under this plan ranges from an honorary award of \$200.00 up to an award of \$2,000.00 per year, depending upon the need of the individual. This scholarship is administered by the University.

The Cincinnati Gas & Electric Scholarship

This annual scholarship provides full tuition and fees for a freshman and half-tuition and fees in his remaining three years of college. The Company will refund

tuition costs not initially covered if the scholarship recipient accepts postgraduate employment with the Company. The scholarship is restricted to a student in the College of Business Administration who either resides in, or attended, a high school in the Company's service area or who is the son or daughter of a C. G. & E. employee.

Cincinnati Catholic High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Catholic high schools for boys of Cincinnati on the recommendation of the principal. These are full tuition scholarships.

Jesuit High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Jesuit high schools of the Chicago and the Detroit provinces on the recommendation of the principal. The value of the scholarship is to be determined by each student's financial need.

Honors Course Scholarships

Scholarships for study in the Honors Course are offered to students who have maintained an excellent academic standing in high school. Four years of high school Latin are a prerequisite. The number of freshmen in this course is limited. For this reason the funds set aside for scholarships are normally adequate to provide partial or full tuition and, in some cases, help beyond tuition to a deserving student. The amount of the scholarship is determined partly by the academic record and partly by the real need of the applicant.

ROTC Scholarships

The Department of the Army annually awards two-year and four-year ROTC Scholarships to outstanding students. Applications for the four-year scholarships are submitted by high school senior candidates through the Army Headquarters in the area of the student's residence. For additional information, high school seniors should contact their guidance counselors. Several two-year scholarships are awarded to members of the Xavier University sophomore ROTC class. All scholarships cover the cost of books, tuition and fees, plus a monthly \$50 allowance.

Students in the advanced course (junior and senior years) also receive a \$50 per month allowance.

Competitive Scholarships for Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools in the Greater Cincinnati area. The Greater Cincinnati area includes Hamilton, Butler, Clermont, and Warren counties of Ohio; Boone, Campbell, and Kenton counties of Kentucky; and Dearborn county of Indiana. These scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Competitive Scholarships Outside Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools outside the Greater Cincinnati area. The

scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Instructions for All Applicants

Applicants for scholarships shall have completed all the requirements for admission to the University before being considered for a scholarship. Moreover, they must submit a Parents' Confidential Statement. This should be done by March 1.

Scholarship Regulations

1. A scholarship applies to tuition only and does not excuse the designee or holder from payment of other fees.
2. Scholarships must be accepted for the year or years they are awarded. They may not be transferred by the holder and may not be resumed at will after having been relinquished.
3. The scholarship will be awarded for one year and will be renewable in favor of the holder for each successive semester of his four-year college period.
4. Holders of honor scholarships must maintain a quality-point ratio of at least 2.5 in the freshman year, and 3.0 in the sophomore, junior, and senior years.
5. The award in all cases is made at the discretion of the Scholarship Committee of Xavier University.
6. Holders of honor scholarships are expected to participate in the co-curricular activities of the University.

Source of Scholarship Funds

The permanent scholarships that have been generously given to Xavier University in the past are listed below. Income from these scholarships is increased each year by gifts of annual scholarships. In addition, the University uses funds from its current income to make up the balance of these awards.

Perpetual Scholarships

Anonymous, \$70,000

A scholarship fund—the gift of a friend of the University.

William F. Poland, S.J., Fund, about 1906, approximately \$115,000

Fr. Poland established this fund from his patrimony at the time of the death of his parents.

Elizabeth Sullivan Scholarship, 1924, \$3,000

Mary B. Shannon Scholarship Fund, 1925, \$13,334

Worpenberg Family Scholarship, \$5,000

This is a partial scholarship to be awarded preferably to a graduate of Saint Xavier High School.

Rev. James D. Foley, S.J., Scholarship (in his honor), \$2,000

Mary Mohlenhoff Scholarship (in memory), \$2,000

Passion Play Scholarship, 1928, \$500

The Ryan Sisters Scholarship, \$3,000

Siedenberg-King Scholarship, \$2,000

Margaret Shea Scholarship, 1937, \$3,500

Archbishop McNicholas Memorial Scholarship, 1940, \$5,000

Mrs. F. W. Hinkle Memorial Scholarship, 1940, \$5,000

The Ryan Sisters Memorial Scholarship, 1940, \$5,000

Saint Xavier Church, Memorial Scholarship, 1940, \$5,000

The four preceding scholarships were given on the occasion of the Quadricentennial Observance of the foundation of the Society of Jesus and the Centennial of the Jesuits in Cincinnati.

Rev. James McCarthy, S.J., Scholarship, 1942, \$3,468

This partial scholarship is to be given to a needy and deserving student in honor of Fr. James McCarthy, S.J. It was donated by the will of Mrs. Clara Pressler.

Xavier Student Council, 1942, \$2,087.47

The proceeds from a World War II metal scrap drive conducted by the Student Council were donated for this scholarship.

Bernard H. Ludwig Scholarship, 1948, \$2,000

A partial scholarship to be given preferably to some member of Saint Augustine's Parish, to be selected by the pastor of Saint Augustine's, Cincinnati.

Charles A. Claggen Scholarship, 1949, \$3,576

A partial scholarship for any worthy poor student, preference to be given to a student of Saint Peter's Roman Catholic School, New Richmond, Ohio.

Blessed Virgin Mary Scholarship, \$5,000

A partial scholarship established by an anonymous donor in honor of the Blessed Virgin Mary.

Rev. Albert Dierkes, S.J., Scholarship, \$6,400

A partial scholarship established by an anonymous donor in memory of Fr. Dierkes.

Fred Tuke Scholarship, 1951, \$10,000

A donation by Mr. Fred Tuke provided a full tuition scholarship.

Walter A. and George McDonald Fund

This fund, established in 1960 to honor Mr. and Mrs. Andrew J. McDonald, provides income for a graduate assistant in the Department of Chemistry.

Walter A. and George McDonald Scholarship, \$1,000

Dr. Edward McGrath Scholarship, 1956

A partial scholarship donated in memory of Dr. McGrath.

Lillian W. Ochs, \$250

Class of 1931 Scholarship, 1956, \$7,500

A half-tuition scholarship donated by the Class of 1931 on the occasion of the twenty-fifth anniversary of their graduation.

The Stephens L. and Margaret J. Blakely Scholarship, 1958

A tuition scholarship maintained by the annual contribution of Mr. John R. Blakely and Mrs. Jane B. Woodrough in honor of their parents. The scholarship is awarded to a pre-law student from Kenton County, Kentucky.

The Richard A. Jones Journalism Scholarship, 1960, \$19,161.83

A bequest from the estate of Mrs. Alma J. Snodgrass to the Evening College in memory of her father, Cincinnati newspaperman.

The Jesse K. Dunn Memorial Scholarship Fund, 1959, \$7,000

The Frederick A. Hauck Physics Research Scholarship, 1962, \$1,500 annually

This is an award to a student (or students) selected by the Department of Physics to pursue, on the undergraduate level, research projects commensurate with his (or their) intellectual promise.

The Matthew Ryan Family Scholarship, 1964, \$10,000

Given at the request of the late Miss Margaret Ryan.

The Fredin Memorial Scholarships, 1964

These are annual awards for one or more students to pursue their studies in French in France. Established from the bequest of Mlle. Aline Fredin in memory of her parents.

The Mr. and Mrs. Theodore H. Oppenheim Scholarship Fund, 1966

A scholarship to be awarded at the discretion of the Scholarship Committee.

The Wilson J. (Woody) Sander Memorial Scholarship Fund, 1967, \$15,700

This Scholarship Fund honors the memory of the late Mr. Sander, '34, whose service to his Alma Mater included chairmanships of the Athletic Board and the Alumni Living Endowment Fund.

The William V. Masterson, '41, Memorial Scholarship

This memorial provides tuition assistance to an outstanding student in marketing for his senior year.

FINANCIAL AID

Financial Assistance to Upperclassmen

Full-time students who have been on the Dean's List for three succeeding semesters are eligible to apply for financial assistance. Applications should be submitted to the Director of Placement and Student Aid, Xavier University, no later than April 1. Applicants are required to provide a Parents' Confidential Statement.

The Chaswil Foundation Student Loan Fund

The Chaswil Foundation Student Loan Fund has been established by the late Sir Charles F. Williams to assist students in the undergraduate division. Students enrolled in the undergraduate day division of Xavier University are eligible to apply for loans after the completion of their first semester. In any one calendar year, a student can borrow up to one-half of his tuition and fees, or \$200.00, whichever is less. The loan is interest free. The recipient will be required to pay back a minimum of \$200.00 of the total amount borrowed, during each calendar year after he leaves Xavier University, whether by graduation or for any other reason.

The Lichter Foundation Loan Fund

The Lichter Foundation Loan Fund was established in 1955 through the generosity of Mr. Jacob Lichter of Cincinnati. Students enrolled in any division of Xavier University are eligible to apply for a loan after the completion of their first semester. The maximum to be borrowed in a particular case will be determined by the Committee on Scholarships. The recipient of a loan will be expected to pay back the money at his earliest convenience. The notes will begin to bear interest at the rate of 3% per annum, payable semiannually, one year after the recipient leaves Xavier University, whether by graduation or for any other reason.

Government Loan Fund

The National Defense Education Act of 1958 provides for the creation, at American colleges and universities, of loan funds from which needy undergraduate and graduate students may borrow for the completion of their higher education. Recipients are selected by the school itself.

The borrower must be a full-time or half-time student, in need of financial aid for his education, and capable of maintaining good academic standing. An undergraduate may borrow up to \$1,000.00 in one year but not over \$5,000.00 in his entire course of higher education. A graduate student may borrow, on the same basis and on the same repayment plans as the undergraduate, up to \$2,500.00 per year but not to exceed a total of \$10,000.00, including any undergraduate loans he may have incurred.

Repayments begin on a quarterly basis within nine months after the borrower ceases to be at least a half-time student. These loans carry a 3 percent interest on the unpaid balance during the repayment period. The loan must be repaid in accord with the terms specified in the promissory note. Under no conditions may the repayment period exceed ten years. For further details, communicate with the Director of Placement and Student Aid, Xavier University.

The Tuition Plan

The Tuition Plan is a convenient way to meet tuition and fees through monthly payments. Under this system, payments are spread out over eight monthly installments if the contract is for one academic year's expenses, or over the entire year if the contract is for two, three, or four years' schooling. Any qualified parent under 60 years of age who uses the two, three, or four year plan is covered automatically by Parent Life Insurance, at no additional expense. The insurance provides for the payment of the remaining costs covered by the contract, upon the death of the parent who signed the contract.

Cost:

One year plan —4% more than the cash price of tuition and fees for one year.
Two year plan —5% more than the cash price of tuition and fees for two years.
Three year plan—6% more than the cash price of tuition and fees for three years.
Four year plan —6% more than the cash price of tuition and fees for four years.

For details on the Tuition Plan write: Treasurer's Office, Xavier University, Cincinnati, Ohio 45207.

Education Funds Incorporated

Education Funds Incorporated offers a convenient way to meet the cost of tuition and fees through monthly payments. Both parent and student are covered automatically by life insurance, which provides for the payment of the remaining cost covered by the contract in the event of the death or permanent disability of the parent, or repayment of the contract in the event of the death of the student. Interest rates are reasonable.

Payment plans:

One year plan covers tuition and fees for one year, payable in eight or twelve monthly installments.

Two year plan covers two years' expenses—24 monthly payments.

Three year plan covers three years' expenses—36 monthly payments.

Four year plan covers four years' expenses—40 or 48 monthly payments.

For details, communicate with the Treasurer's Office, Xavier University.

The College Work-Study Program

In the Economic Opportunity Act of 1964, Government funds are made available to colleges and universities for part-time work, usually on campus. Applicants should be nationals (citizens) in need of the earnings to meet their college expenses, should have good academic standing, and should carry a normal (full-time) number of academic course hours. Under this program students may work up to 15 hours per week when their classes are in session and not more than 40 hours per week in vacation periods or during the summer when not enrolled in classes. Whenever possible, Work-Study jobs will be co-aligned with the student's course of studies to give the most valuable educational experience.

Xavier University participates in this program. For details communicate with the Director of Placement and Student Aid, Xavier University.

Educational Opportunity Grants

The Higher Education Act of 1965 provides funds through the United States Office of Education to Xavier University for making grants of from \$200 to \$1,000 a year to worthy undergraduate students in exceptional financial need. Grants are renewable for four years. The amount awarded to a student must be matched by some other type of financial aid provided either by the University, an outside scholarship, or other source.

Further information may be obtained from the Director of Placement and Student Aid, Xavier University.

Awards

The American Institute of Chemists' Medal. A gold medal is awarded to a senior majoring in chemistry for outstanding scholarship.

The Benjamin Bernstein Award. This award of \$100, offered by Mr. Benjamin Bernstein, partner of Touche, Ross, Baily, and Smart, is given to a student majoring in accounting who indicates aptitude in public accounting and whose scholarship in accounting and in over-all average is highest at the completion of his junior year.

The Cincinnati Chapter, National Association of Accountants Manuscript Writing Awards. These awards of \$25, \$15, and \$10 are granted students submitting the best manuscripts on subjects of working interest to the accountant in industry.

The Ervin A. Stadler Accounting Award. An award of \$100 is offered by Mr. Ervin A. Stadler, resident partner of Haskins and Sells, to the student majoring in accounting who attains the highest cumulative average in scholarship and accounting at the completion of his sophomore year and is a member of the Accounting Society.

The Haskins and Sells Foundation Scholarship Award. The Haskins and Sells Foundation has established an annual award of \$500 for the senior with an aptitude for public accounting and with the highest cumulative average in scholarship, accounting, and English at the completion of his junior year.

Financial Executives Institute, Cincinnati Chapter, Award. The sum of \$50 is given to the senior majoring in accounting whose scholastic standing, leadership, and participation in co-curricular activities are exceptional.

The Cincinnati Controllers Institute of America, Inc. Award. A plaque is awarded at the annual educational meeting to a senior majoring in accounting. The student is selected on scholastic standing, leadership, and participation in co-curricular activities.

The Dr. J. T. Clear Biology Key. This key, founded by Dr. J. T. Clear, is awarded annually to the member of the Xavier Biological Society who has completed his major in the Department of Biology with the highest distinction.

The Dorst Chemistry Key. This key, the gift of Arno A. Dorst, is awarded annually to the senior who has completed his major in the Department of Chemistry with the highest distinction.

Craig Menderson Memorial Economics Award. This award of a gold key and \$50 was established in 1966 in memory of fifteen year old Craig W. Menderson. It is given to the senior in economics who best demonstrates intellect, maturity, integrity, spirituality, and personality.

The Intercollegiate English Prize. A purse of \$100 is offered yearly by Mr. David F. Bremmer of Chicago for excellence in English essay writing. The competition includes the Jesuit colleges and universities of the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Alumnae English Prize. This prize is given by the Xavier University Alumnae Association to the student winning the highest place in the Intercollegiate English contest.

The Sweeney English Award. A cash prize of \$25.00 is given in memory of Thomas and Anthony Sweeney to the student completing his major in English with the highest distinction.

The Mermaid Tavern Prize Key. A gold key is offered by Mr. Anthony C. Elsaesser, '12, to the Tavern member meriting highest distinction in literary composition and criticism. Mr. Elsaesser has established an endowment to provide for this key in perpetuity.

The Catholic Poetry Society of America Award. This award is given for an original poem judged superior by the Department of English.

Athenaeum Prize Keys. Two gold keys are given to authors of the best contributions by undergraduate students to the *Athenaeum* literary magazine as judged by members of the Department of English.

Xavier Fourragere. This military decoration is presented to ROTC Advanced Course students as an honor for military attainment.

The American Marketing Association Award, Cincinnati Chapter. An award of memberships and subscriptions valued at \$25.00 is made to the senior who has been outstanding in the study of marketing.

NFBA Foundation, Inc. Scholarship. The National Food Brokers Association annual award of \$400 is given to a junior or senior majoring in marketing. It is presented to a student interested in making a career in the food industry.

The Kramer-Miller Mathematics Award. An award of \$50 is made to the senior majoring in mathematics who has distinguished himself in his studies and has shown the greatest progress in mathematics.

The Mathematics Department—Pi Mu Epsilon Award. An award of \$20 presented by the Mathematics Department and the Ohio Theta Chapter of Pi Mu Epsilon, national honorary mathematics fraternity, to the student in mathematics exhibiting excellence in problem competition sponsored by the Department.

The Military Order of World Wars Medal. The Cincinnati Chapter of The Military Order of World Wars presents a gold medal annually to the outstanding ROTC cadet of the First Year Basic Course.

The Reserve Officers Association of the United States, Cincinnati Chapter. Four medals are presented annually by this association to cadets of the ROTC. A gold medal is awarded to the outstanding cadet in the Second Year Advanced Course and a silver medal to the outstanding cadet of the First Year Advanced Course. Similar bronze medals are awarded to cadets of the First and Second Year Basic Course for excellence in scholarship and proficiency as cadets.

The Xavier University ROTC Rifle Club Award.

The Disabled American Veterans' National Headquarters Award.

The Hamilton County Chapter of Catholic War Veterans' Award.

The Combined Councils, Knights of Columbus Award.

The Cincinnati Chapter of the Sons of the American Revolution Award.

The Association of the United States Army Medal.

The ROTC Bandsman Award.

The American Legion, Fourth District Award.

The Cincinnati Post and Times-Star Award.

The Veterans of Foreign Wars Award.

The Colonel Charles F. Williams' Scholarship and Prize. A gold medal and a \$200 scholarship are offered annually in memory of Colonel Charles F. Williams to the First Year Advanced Course student who ranks highest in scholarship.

The German-American Citizens' League Award. An award of \$25.00 is offered by the American Citizens' League of Cincinnati to the student who attains the highest scholastic average in German for the academic year.

The Heidelberg Club German Award. A gold medal is given to the student in the upper division courses who attains the highest score in a test in German administered by the Department of Modern Languages.

The Francis I. Hamel Prize in Psychology. A book prize established by Dr. and Mrs. Ignatius A. Hamel in memory of their son, Francis I. Hamel, is awarded to a junior majoring or minoring in psychology who has demonstrated excellence in achievement in psychology and who is outstanding in his over-all academic work.

The Frederick A. Hauck Physics Research Awards. A fund of \$1,500 provided annually by Mr. Frederick A. Hauck for research scholarships for undergraduates majoring in physics.

The Mrs. Magdalena Strobl Link Psychology Award. An award of \$50.00 established by Dr. Joseph Link, Jr., in memory of his mother, Magdalena Strobl Link, is given to the best graduating psychology senior. The recipient is selected by the Department of Psychology on the basis of his over-all performance, his performance in psychology, and his achievement on the Graduate Record Examination or the Miller Analogies Test.

The Alpha Sigma Nu Religion Key. A gold key is awarded annually by the Xavier Chapter of the National Jesuit Honor Society to the freshman or sophomore who writes the best essay on a religious topic.

The Intercollegiate Latin Prize. The Very Reverend Provincials of the Midwest Jesuit Provinces offer \$100 annually (\$50 for the first prize, \$30 for the second, and \$20 for the third) for the best translation of classical English and classical Latin. The contest is open to students of the Jesuit liberal arts colleges in the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Ragland Latin Medal. A gold medal, founded in 1935, in memory of Alice D. Ragland, is awarded to the participant who ranks highest in the Intercollegiate Latin Contest.

The Washington Oratorical Medal. A gold medal is offered by the Xavier University Alumni Association for the best original oration delivered in the annual contests in oratory.

The Joseph A. Verkamp Prize Award for the Study of Greek. To encourage the study of Greek, Mr. Joseph A. Verkamp, '07, founded in 1964 an annual award of a Greek Lexicon to the student who excels in Greek in the judgment of the Department of Classics.

The Joseph B. Verkamp Medal. A gold medal is established by Mr. Joseph B. Verkamp, '77, for award to the member of the Poland Philopedian Society who has delivered the best speech in the annual public debate of the society.

The Tau Kappa Alpha—National Honorary Society Speech Fraternity Keys. Delta Sigma Rho-Tau Kappa Alpha Keys are awarded to students selected as members of the National Honorary Forensic Fraternity for their excellence in debate.

The Robert G. McGraw History Medal. This award is made to the student judged by the Department of History to excel in the study of history.

The Gasiewicz Political Science Medal. This medal is awarded to the junior who has made the greatest progress in and contribution to the field of political science.

The Archbishop McNicholas Medal. A gold medal is offered in memory of the Most Reverend John T. McNicholas, O.P., D.D., to that member of the senior class who has excelled in the study of philosophy.

The Martin G. Dumler Key. A key is offered by Mr. Martin G. Dumler, LL.D., to that member of the junior class who has excelled in the study of philosophy.

The David Snyder Religion Medal. A gold medal, founded by Mr. and Mrs. John W. Snyder, Portsmouth, Ohio, in memory of their son, David William Snyder, '31, is awarded for the best catechetical essay written by a junior or senior.

The Religion Key. An award offered by the University Sodality to the student who excels in the subject of Theology.

The James D. Shouse Award. An award of \$200, sponsored by the Avco Broadcasting Corporation, is given annually to a senior for the best academic and co-curricular achievement in the broadcasting arts. The winner's name is also inscribed on a permanent plaque in the Communication Arts Department office.

The J. D. Cloud Accounting Award. This prize of \$100.00 is awarded to the student of the Evening College in the senior accounting class attaining the highest average for his third and fourth years' work.

The Accounting Award of the Cincinnati Chapter, American Society of Women Accountants. This award of \$25.00 is granted to a woman student in the Evening College for excellence in the study of accounting.

Student Government

The purpose of student government at Xavier University is educational. Its goal is twofold: first, to develop a sense of individual and group responsibility for common ideals, and, secondly, to demonstrate through actual living experience the techniques of attaining those goals through group self-organization and self-government.

Student Organizations

Xavier University provides many forms of student activities and organizations for the purpose of promoting religious, social, academic, and cultural relations among the student body. All organizations of students are under the general supervision of the Dean of Men. Approval for meetings and programs must be secured from him directly or through the appointed faculty moderators. With the exception of activities and organizations of a purely religious nature, only such students as are free from disciplinary censure and the scholastic censure of probation are eligible for active membership. The University reserves the right to discontinue or moderate any student activity or organization. By means of its committees and agencies the University also has the right to limit the extent and degree of the individual student's participation.

Religious Activity

Sodality of the Immaculate Conception. The sodality was established and affiliated to the *First Sodality* in Rome on December 8, 1841. Its purpose is to promote a special and filial devotion to the Immaculate Mother of God, to imitate her virtues, and to encourage, both by word and example, an eminent purity of morals and a manly fidelity to the practices of religion.

Academic-Cultural Groups

The Xavier Accounting Society has the objectives of broadening of knowledge and deepening of interest of its members in the field of accounting, the promotion of mutual helpfulness, and the fostering of fellowship in the pursuit of this worthy aim.

Association of Afro-American Students, organized in 1968 at Xavier for Negro students, provides a forum for the exchange of ideas and the formulation of solutions to problems experienced by black people.

The Alchemysts Club, an affiliate chapter of the American Chemical Society, furthers students' interest in chemistry. Together with the chemistry clubs of other Catholic colleges of Greater Cincinnati, it forms the Albertus Magnus Chemistry Club.

The Musketeer Band. The band promotes student interest in music, stimulates spirit at football and basketball games, gives concerts, and provides music for R.O.T.C. Corps Day formations and special University functions.

The Biology Club, open to students of biology, sponsors original investigation in the field.

The Xavier University Clef Club makes numerous concert appearances and entertains at University functions.

Economics Club. Undergraduates interested in economics have banded together for further discussion of this subject.

The French Club, le cercle Francais de Xavier promotes interest in French affairs and in the history, the literature, the art, and the customs of France.

The Heidelberg Club fosters an interest in the history, culture, and language of the Germanic people.

The Investment Club has limited membership and is designed to promote an understanding of security selection and investment management. Members regularly commit monthly dues to the purchase of securities.

Organization for Interracial Awareness brings students together for the betterment of race relations and the awareness within the University community of racial problems.

The Jazz Club presents jazz programs on campus and on the University and other radio stations.

The Xavier University Marketing Club. This organization supplements the students' classroom activity by inviting outside speakers and by orienting the members toward opportunities in the field.

The University Players stage plays during the academic year, and afford members an opportunity to take part in phases of play production—acting, directing, stagecraft, lighting, and scenic design.

The Mathematics Club promotes scholarly development by interesting its members in pure and applied mathematics.

The Mermaid Tavern, a writers' club of limited membership, promotes the association of graduates and undergraduates actively interested in writing. *The Tavernacular*, a privately circulated magazine, is issued quarterly.

Pershing Rifles: Company G-1, a member of *The National Society of Pershing Rifles*, is a voluntary association of college students enrolled in basic courses in military science. Its purpose is to encourage, preserve, and develop the highest ideals of the military profession and to promote American citizenship. Company G-1 competes against drill teams from other universities at drill meets held at various locations in this part of the country. The company drills intensively and has developed a noteworthy *esprit de corps*. Elected Pershing Rifles members of the Advanced Course command the unit and administer its affairs. Any Basic Course student capable of passing certain tests is eligible for membership. Members wear the blue and white fourragere on the left shoulder of their ROTC uniforms.

The Xavier Philosophy Club fosters in its members greater interest in philosophical subjects. Meetings are informal and free discussion is encouraged.

The Poland Philopedian Society, the oldest campus organization, was founded in 1840 for debating—intercollegiate and intramural.

The Psychology Club provides opportunity for students to increase their knowledge of psychology and to participate in extra-curricular work in this field.

The Society for the Advancement of Management. The University Chapter prepares Xavier men for business careers through seminars, conferences, and management development programs.

The Spanish Club encourages its members to learn more about the Iberian language and customs and the literature of Hispanic countries.

The St. Thomas More Pre-Law Society was founded by the Xavier University Pre-Legal Committee for students interested in a career in the legal profession. Its program affords its members, in addition to the guidance of the Pre-Legal Committee, the counsel also of law school deans, professors, and students, of members of the local judiciary and bar, and especially of members of the Natural Law Society.

Student Volunteer Services involve students in volunteer projects at the local level and in such organizations as the Peace Corps, the Papal Volunteers, Extension, and VISTA. The organization works closely with Chabanel House. Projects include tutoring, direction of recreation, trips to Appalachia, and other activities of social and civic significance.

WCXU, the Xavier station, presents music, news, and sports sixty hours a week from its studio in the Alter Building. Student Council owns the station, and students in Communication Arts staff it. It operates on 660 k.c.

Social and Service Clubs

The Xavier University Bridge Club has a franchise from The American Contract Bridge League. Its activities include monthly duplicate tournaments, invitational tournaments with other schools, and the sponsorship of bridge classes.

The Cheerleaders organize cheering at games and rallies.

The Dormitory Council consists of representatives of residents of the University halls, and promotes the spiritual and social welfare of the dormitory students.

The Xavier ROTC Radio Club maintains a station operating in the amateur bands and as part of MARS—the Military Affiliate Radio System. Students receive instruction necessary for earning operators' licenses.

The ROTC Rifle and Pistol Club practices marksmanship under the direction of a member of the Department of Military Science. The teams participate in intercollegiate competition, varsity and ROTC competition as members of the Ohio-Kentucky Rifle League, The Ohio ROTC Rifle League, and The Midwest Pistol League.

The Sailing Club participates in intercollegiate regattas as a member of the Midwest Collegiate Sailing Association. Its home port is Lake Cowan.

The Student Directory is compiled annually by undergraduates working under the direction of the Dean of Men.

The Xavier University Council of the Knights of Columbus (No. 4509) was established, and its first class was initiated in February, 1958.

Regional Clubs

The Chicago Club

The Detroit Club

The East Coast Club

The Fort Wayne Club

The Hamilton Club

The Indianapolis Club

The Louisville Club

The Toledo Club

Intramural Athletics

Intramural programs are carried on in a variety of sports. Activities are carried on in baseball, basketball, bowling, handball, touch football, and other sports.

Intercollegiate Athletics

Xavier University believes that there are sound values in intercollegiate athletic competition and that it has a valid place in American education. Intercollegiate athletics, therefore, are conducted to further the education of the students physically, emotionally, intellectually, and morally. Participants learn the value of cooperative effort and the necessity of subordinating their own good to that of the group. They also see the need for poise and for competence in the face of opposition, and they learn a sportsmanlike respect for rules.

Intercollegiate rivalry also benefits the student body by providing wholesome recreation and the opportunity for the undergraduates to show their loyalty to all phases of the University's program. Students gain the educational value of sharing in group activity, and also learn to respect the rules as sportsmen.

The program of intercollegiate athletics at Xavier includes basketball, baseball, football, golf, sailing, tennis, and occasional sports. These activities are administered

by the Athletic Director, who is advised by the Athletic Board and who is responsible to the Vice President, Student Affairs.

Participants in intercollegiate athletics, as in other co-curricular activities, must be *bona fide* students in good standing. They will have entered the University in accordance with the admission norms published in the Catalogue and will be subject to the regular scholastic demands. If, in the judgment of the dean, their participation in athletics interferes with their progress toward a degree, he may forbid them to continue even though they are not formally on scholastic probation.

Xavier Publications

Primarily intended as a source of information for the Xavier family, these publications offer special opportunity to students who wish to learn news writing, editing, and creative literary expression.

The Athletic Review, published by the Department of Public Relations, is the official program for all home football and basketball games.

The Musketeer, the yearbook of the University, is a student-edited publication. Intended as a permanent record of student life at Xavier, *The Musketeer* presents a panorama of the various school events, social functions, athletics, and campus organizations.

The Athenaeum, a literary magazine that dates from the old college, is intended to foster literary effort among students. The staff is composed of honor students in English.

The Xavier Alumnus combines campus news with reports about Xavier men and women everywhere. It is published by the Department of Public Relations.

The Xavier University News. Xavier University is the publisher of *The Xavier University News*. As publisher the University operates through a faculty advisor who is ultimately responsible to the President and who seeks to achieve the purposes of the publication through a program of pre-publication leadership and guidance as well as post-publication review and critique. The judgment of the advisor on the acceptability of material for publication is final.

Honor Societies

Alpha Sigma Nu. A chapter of this national honor fraternity for students of Jesuit colleges and universities was established at Xavier in 1939. Candidates for membership, chosen during their junior or senior year or from the Graduate School, must be outstanding in scholarship, in loyalty, and in service to the University.

Pi Mu Epsilon. The Ohio Theta Chapter of Pi Mu Epsilon, the national honorary mathematics fraternity, was established at Xavier University in 1962. The purpose of this organization is the promotion of scholarly activity in mathematics among students in academic institutions. Membership is limited to students, both graduate and undergraduate, majoring in mathematics or related subjects who have achieved distinction in scholarship and have done outstanding work in mathematics.

Psi Chi. Honorary psychology fraternity.

Sigma Pi Sigma. There is a chapter of Sigma Pi Sigma, national physics honor society, at Xavier University. Its purposes are to serve as a means of awarding distinction to students having high scholarship and promise of achievement in physics; to promote their interest in research; to encourage professional spirit and friendship among physics students; and to popularize interest in physics.

Tau Kappa Alpha. Honorary forensic fraternity.

The Xavier Order of Military Merit. XOMM is an honorary organization of Advanced Course students selected annually by a board consisting of elected representatives from the existing membership of XOMM and a member of the military faculty. The selection of new members is subject to approval by the PMS. Some of the criteria for selection to membership are leadership qualities, military and academic grades, and relative standing in the Cadet Regiment. Members of the order are awarded a red fourragere to be worn as part of the uniform.

Phi Alpha Theta. Kappa Nu Chapter, activated in 1965 at Xavier, is open to history students with a 3.25 or better over-all average.

Delta Sigma Pi, a national business administration honorary fraternity, recognizes academic excellence and leadership.

Kappa Kappa Psi, organized on campus in 1968, is a national band honorary fraternity that recognizes academic achievement and service.

Non-Student University Groups

The Booklovers Association, organized in 1925, actively promotes the interests of the library through the purchase of books and periodicals. Funds are raised by means of membership fees, benefit parties, and special gifts. This group, recruited largely from mothers of students, meets monthly during the academic year for lectures, card parties, and entertainments.

The Dads' Club of Xavier University has its purpose: (1) cooperation with the administrative body of Xavier University in maintaining high standards of education; (2) the support of extra-curricular activities of the student body; (3) social acquaintance among members of the club; (4) promotion of the general welfare of Xavier University. Members of the faculty, and fathers of past, present, and prospective students are eligible for membership.

Xavier University Alumni Association. This association was organized in 1888. Its purpose is to strengthen and perpetuate college friendships; to preserve in the former students a warm regard for Alma Mater and a lively memory of the substantial benefits she has bestowed; to cherish and advance her interests, maintain her honor, and sustain her reputation by manly and honorable conduct.

The Xavier University Alumnae Association. Any woman student who has acquired thirty or more credits in residence is eligible for membership. The group, founded in 1926, is affiliated with the International Federation of Catholic Alumnae.

The Honors Course Committee. The women of this committee support the Honors Bachelor of Arts program and allied activities of the College of Arts and Sciences.

The Faculty Wives. This organization sponsors social activities to promote friendship among families of the faculty and the administration.

The Xavier Marian Society. This is an organization of men and women desiring to live and serve in accord with the spirit of Vatican II.

The Musketeer Club. Alumni and friends of the University's athletic program participate in the activities of this club.

The Natural Law Society. Sponsored by Xavier University, this Society was founded for members of the legal profession. Its purpose is to assist legislators, judges, and attorneys in the application of the natural law to the enactment, interpretation, and practice of law. Membership is informal and open to the entire legal profession. The Society has a Governing Board composed of Greater Cincinnati lawyers. It sponsors speakers, panel discussions, and study seminars.



The College of Arts and Sciences The College of Business Administration

Application for Admission and Admission Requirements

Admission policies apply in general to all undergraduates. Those planning to enter the Evening College, however, should apply directly to the Dean of that college. No deposit is required of Evening College applicants.

Application for Admission

Application for admission to the College of Arts and Sciences or the College of Business Administration is made on a special form which will be supplied upon request made to: Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207. The applicant must fill out the form and send it to the Director of Admissions. He must also request his high school (and any colleges he may have attended) to forward directly to the Director of Admissions a transcript of his academic record.

An application fee of \$15.00 must accompany the application. The fee is not refundable or applicable to any account. Applicants are urged to submit their application forms with the fee as early as possible. Upon receipt of an application from a student requiring housing accommodations, the Director of Housing will communicate with the applicant concerning a campus residence hall reservation.

Requirements for Admission

To be eligible to apply a student must be the graduate of an accredited high school with a minimum average of C (80%) and have a recommendation from his high school principal. A minimum academic average of B is ordinarily required for admission to the Pre-Medical program. An applicant with a lower average is admitted at the discretion of the Committee on Admissions.

Applicants are required to take the College Entrance Examination Board Scholastic Aptitude Test. They should consult their high school principals for details regarding the test.

An applicant who was registered previously on the Evanston Campus but who has interrupted his residence is required only to submit the Application for Admission, unless he has attended another school in the meanwhile.

A student who accepts admission to Xavier University also accepts the obligation of observing the regulations of Xavier University.

Subjects Required for Admission

A unit is the equivalent of a subject extending through a scholastic year of thirty-six weeks with five recitations per week. A minimum of fifteen units is required. The following units are required of all applicants for admission:

English	4	Mathematics	2
Foreign Language	2	Natural Science	1
History	1	Other subjects	5

Of the five non-specified units, one must be in a college-preparatory subject. Not more than four will be accepted in vocational subjects. The five units must be offered from courses approved by the applicant's high school, for which credit has been granted. Single half units are acceptable only in those courses considered half-year subjects. Less than one full unit is unacceptable in subjects which ordinarily cover a full year's work and for which a full unit is usually granted. Applicants offering a classical or modern language must present a minimum of two units. An applicant who does not present two units of credit in a language (modern or classical) may offer as a substitute two units of either history and/or natural science. More than four units in any specific subject is not acceptable.

Admission on Probation

Applicants who do not meet the qualifications for admission may, under special circumstances, be admitted on probation at the discretion of the Committee on Admissions. They must pass whatever examinations the Committee on Admissions shall deem necessary.

Advanced Placement

The University grants advanced placement with credit in subjects in which a student has made a satisfactory score in the College Entrance Examination Board Advanced Placement tests. There is a \$5.00 service fee for students in this program who request that their grades be sent to another school.

Admission to the Pre-Medical Program

A minimum academic average of B is ordinarily required for admission to the pre-medical program. However, applicants whose averages are lower may be considered by the Committee on Admissions, given aptitude and intelligence tests, and admitted at the discretion of the Committee on Admissions.

Admission to Advanced Standing

Applicants from other institutions of collegiate rank must file with the Director of Admissions complete original credentials from all institutions attended. These credentials must include an official transcript of all high school and college credits showing the entire scholastic record; evidence of honorable dismissal or dismissals; and evidence of satisfactory completion of financial arrangements with the institution or institutions attended. No applicant may disregard his previous college record and apply for freshman standing.

The rank of advanced standing to which the student will be admitted will depend upon the quantity and quality of the work done in the other institution or institutions, the accreditation of the institution, and the conformity of the work to the degree program for which the student wishes to register. Courses in which the applicant has received the lowest passing grade will not be acceptable. These courses need not be repeated unless repetition be deemed necessary by the Dean or the directors of the departments. In all cases evaluation of credits for advanced standing will be provisional for at least one semester.

Students dismissed for poor scholarship from the University or from other institutions will not be eligible for admission or readmission until the lapse of at least one semester. In all cases, admission or readmission and the conditions of such, will be determined finally by the Committee on Admissions.

All credentials must be on file in the office of the Director of Admissions at least one month prior to the day of registration. (See paragraph on Necessary Credentials.) It is advisable to get transcripts in much earlier.

Necessary Credentials

Applicants for admission to Xavier University must submit official records from all high schools and colleges previously attended. *These records must be sent to Director of Admissions directly by the proper officer of the school or schools formerly attended—never through the student.* Credentials accepted for admission become the property of the University and are kept on file permanently. *All credentials must be filed at least one month before the day of registration.*

Admission of Special Students

Although the University usually recommends a complete program of studies, students who possess sufficient maturity, experience, and educational background may, with the dean's consent, choose special courses without following a complete degree program. Courses thus taken may be subsequently credited toward a degree if proper credentials are presented.

Notification of Admission

The applicant will receive from Xavier University a notice of admission or a notice of unfavorable action as soon as the University has received his admission form and the official records from all high schools and all colleges previously attended.

Provisional Admission

Provisional admission may be granted by the Dean to a student who has been unable to complete arrangements for formal admission before registration dates. If the student is later discovered to be unqualified for admission, his admission and registration are canceled.

Admission of Veterans

Xavier University is accredited with the Veterans Administration for educational training under United States Code, Title 38, Chapter 31 (Disabled Veterans), Chapter 34 ("New" GI Bill), and Chapter 35 (War Orphans).

All requests for information should be addressed to The Director, Veterans' Educational Benefits, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

Admission to Evening College

Those seeking admission to the undergraduate Evening College, whether in Arts and Sciences or in Business Administration, should apply to: The Dean, Evening College, Xavier University, Cincinnati, Ohio 45207.

Most of the regulations under "Application for Admission and Admission Requirements" apply also to the Evening College. But certain differences must necessarily exist between admission to a full-time and a part-time program; hence, those seeking admission to the Evening College would be well advised to write or telephone that office.

Registration

Time of Registration

Fixed dates in each session found in the academic calendar of this Catalogue are reserved for registration.

Late Registration

Registration on days later than the assigned dates may be permitted upon the payment of a late registration fee of \$5.00 and \$1.00 per day up to ten days.

Change in Schedule

After the student has filed registration forms, changes in courses or sections can be made only with the consent of the Dean at the recommendation of the departmental advisor. No change in schedule may be made later than one week after the inception of classes.

A fee of \$3.00 will be charged for each change.

Number and Choice of Courses Permitted

The number and choice of courses or total number of credit hours in a student's program of studies are subject to such restriction as shall be deemed necessary by the Dean or the departmental advisor.

Selection of Courses

Students must observe prerequisites set by the University or by the departments which conduct the instruction. *Students may not disregard the directions of the dean and of the chairmen of departments in this matter.*

Since the University must consider the needs of all students, it may sometimes be unable to accommodate itself to the preferences of some students for particular hours and professors. The scheduling of courses and sections at certain hours does not mean that a student can always be admitted to any given section which he may select.

Fees

Communications concerning costs for the Evening College should be addressed to the Dean of the Evening College, Xavier University, Cincinnati, Ohio 45207. Certain charges, such as the deposit with the application, are not required by the Evening College.

The following rates are effective in the regular academic year and in the summer sessions. All communications concerning expenses for the College of Arts and Sciences or the College of Business Administration should be addressed to the Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

A non-refundable fee of \$15.00 must accompany the Application for Admission. For those requesting housing accommodations, an additional \$100.00 is required. The housing deposit will be applied to the student's regular account. It will not be refunded if the applicant, having been accepted, cancels his application or fails to enter the University.

Accounts Payable (Undergraduate Day Classes)

All accounts must be settled on the day of registration. Attendance at classes will not be permitted until all financial obligations have been completed.

Ordinary Expenses

Tuition per credit hour, undergraduate colleges	\$38.00
N.B.—Auditors pay same rate as above.	
Matriculation fee (payable once)	10.00
R.O.T.C. fee (per semester)	10.00
Deposit (partially refundable)	25.00
Laboratory science fee (per course per semester)	20.00
Laboratory materials deposit (per course per semester—partially refundable)	10.00
Laboratory materials deposit, Comparative Anatomy	15.00
Laboratory materials deposit for science thesis (partially refundable)	25.00
General fee (per semester)	50.00
(The general fee includes the use of all non-classroom facilities, the Student Health Center, and a reduction in the fee charged for the services of the Psychological Services Center.)	
Identification Card (annually)	3.00
Language laboratory fee (to be paid by all students required to use the language laboratory, per semester)	5.00
Psychology laboratory fee, including Experimental Psychology, Physiological Psychology, and Statistical Techniques (per semester)	10.00

Honors Course

A flat rate of \$600.00 per semester (exclusive of military fees) has been approved by the Board of Trustees for students pursuing the Honors A.B. degree course. This flat rate will also include extra courses which the Honors A.B. student, with the permission of the Dean, wishes to take.

Contingent Expenses

Fee for change in registration	\$ 3.00
Late registration	5.00
Additional per day	1.00
Maximum	10.00
Special examinations (each)	2.00
Duplicate transcript	1.00
Graduate Record Examination	4.00
Graduation fee	25.00
Service charge (deducted if bill is paid in full within thirty days after the opening date of the semester)	4.00

Room

Room, per semester	\$175.00-\$200.00
Room damage deposit (refundable when student no longer lives on campus)	25.00

Room Equipment

All rooms are equipped with a bed, desk, chair, bed linen, and desk lamp. Students are expected to bring blankets, towels, and soap.

Board

Meals are served in the University Center. Students who live on campus are required to take their meals in the University Dining Room from Monday through Friday. During the academic year rates for three meals a day, five days a week, will be between \$260.00 and \$280.00 per semester, depending on food, labor, and maintenance costs. Meals are taken on a pay-as-you-go basis on Saturdays and Sundays.

Refunds (Undergraduate)

A refund of *tuition* may be claimed in the case of withdrawal or dismissal. During the academic year the amount refunded will be diminished by 20 per cent of the total initial amount for each two weeks of class meetings or fraction thereof. *No refund will be made after classes have been in session for more than eight weeks.* The amount of the refund will be calculated from the date of formal notification of withdrawal. Cf. Withdrawal from the University.

During summer sessions the amount refunded will be diminished by 20 per cent of the total initial amount for each four class days of the session or fraction thereof. No refund will be made after classes have been in session for more than sixteen class days.

Fees are not refunded in regular or summer sessions.

A refund of board expenses may be claimed by one separating from the University. The amount of refund will be proportioned to the date at which the student gives formal notice of separating from the University.

Students drafted or called to service as reservists will receive a 100% refund of tuition and a partial refund for the unused portion of their General Fee. At the time of application for this refund, the student's ID card must be returned to the Treasurer's office.

Academic Regulations

Classification of Students

Lower Division Groups:

1. Freshmen—students having less than 30 credit hours and 60 quality points.
2. Sophomores—students having from 30 credit hours and 60 quality points to 62 credit hours and 125 quality points.

Upper Division Groups:

1. Juniors—students having from 63 credit hours and 126 quality points to 93 credit hours and 187 quality points *inclusive of all lower division requirements.*
2. Seniors—students having a minimum of 94 credit hours and 188 quality points *inclusive of all lower division requirements.*

Other Groups:

1. Part-time—students taking less than 12 credit hours of work in any semester.
2. Unclassified—students who have not declared themselves as candidates for any degree.
3. Auditors—students not taking courses for college credit.

Unit of Instruction

A unit of instruction is one hour a week for a minimum of fifteen weeks. The unit is called a *credit hour*. A weekly two- or three-hour period of laboratory work is considered equivalent to one credit hour.

Examinations

Examinations in all courses are regularly held at mid-semester and the end of the semester. A student who has been absent from a mid-semester or semester examination will receive a grade of X if the excuse for the absence is acceptable to the dean; otherwise, the absentee will receive an automatic failure. Absence, however, does not excuse a student from the requirement of a special examination at a time determined by the Dean. *If an X grade is not removed within two weeks, a grade of F will be given for the course.*

Written assignments are due at the time specified by the instructor. If extension of time is granted, the student will be given a temporary grade of I. Unless the assignments are completed within two weeks after the last day of the regularly scheduled examinations, the student will be recorded as failing the course.

If a student claims knowledge of a subject for which he cannot furnish an official record, a special examination may be given with the approval of the Dean and the chairman of the department.

Grading System

- A — Exceptional. Indicates not only high achievement but also an unusual degree of intellectual initiative.
- B — Good. Indicates attainment above the average.

- C — Average. Indicates the normal attainment for the average student.
- D — Inferior. Indicates passing work but below the normal attainment.
- F — Failure.
- I — Incomplete; grade withheld pending fulfillment of assignment.
- W — Withdrawal (approved).
- X — Absent from examination.

N.B.—No student may withdraw from a class within the last 28 days before the first day of the final examinations. At this time he must either take the examinations or receive a failure.

All withdrawals must be official.

1. The student must obtain written permission of his Dean.
2. The student must go to the Registrar's office and *personally* withdraw.

Quality Points

The quality point is the unit used in measuring the quality of student achievement in a course. The number of quality points received for any course is equal to the number of quality points attached to the grade received multiplied by the number of credit hours yielded by the course. Quality points are given as follows:

- A — 4 points per credit hour
- B — 3 points per credit hour
- C — 2 points per credit hour
- D — 1 point per credit hour

The scholastic standing of the student at the end of any session is the ratio of the total number of quality points received to the total number of credit hours carried in that session. An Evening College session or semester consists of twelve consecutive semester hours.

Probation

Freshmen admitted to the University on probation must earn a quality point average of 1.75 during the first semester to remove the probation.

Students whose academic work does not meet the following quality point norms will incur probation:

Freshmen whose average falls below 1.75 in either semester.

Sophomores, juniors, and seniors whose average falls below 2.00 in any semester.

Probation will continue for at least one semester. During that semester the student's program will be reduced by at least one course, and he may not participate in co-curricular activities except those of a religious nature. Probation which begins or ends at midyear shall begin or end with the first day of class in the second semester.

If the student fails to average 2.00 during the semester in which he is on probation, he will be dismissed from the University.

If his average during that semester is 2.00 but his over-all average is less than 2.00, his probation will continue for a second semester.

A student who continues on probation during two consecutive semesters because his average is below 2.00 will be dismissed from the University.

If the student's record or certain modifying circumstances indicate that his work will improve and that he will graduate in approximately normal time, the dean will give due consideration to such facts as the record indicates. The above should be interpreted in the light of the fact that an average of 2.00 is a minimum requirement for graduation.

Warned List

A freshman student whose quality point average is low but not low enough to justify his incurring probation is placed on the warned list.

Such a student does not come under censure, but his participation in co-curricular activities may be limited at the discretion of the dean or the student's advisor.

Failure

A student who fails in two or more courses in a semester may be excluded from registration at the dean's discretion.

Permission to re-enter the University will be granted only after the student petitions for re-admission in writing and sets forth evidence of his ability to do satisfactory academic work.

Censure

The University reserves the right to censure the conduct of any student on or off the campus in accord with the generally accepted norms of good behavior, Catholic practice, and Catholic principles of morality. This censure will be regarded as purely disciplinary and may take the form of correction, suspension, or dismissal which the President of the University, upon advice of the Committee on Student Welfare, may deem appropriate. Suspension will carry with it the scholastic loss resulting from absence, and dismissal will mean the loss of credit hours. When a student incurs the disciplinary censure of dismissal, or withdraws while under the censure of suspension, the University has the right to declare, at the discretion of the President, the facts of disciplinary censure to the admissions officer of any educational institution to which the student may subsequently apply.

Attendance

In order to secure credit in any course in which he is registered, the student is required to attend classroom and laboratory exercises *regularly* and *promptly*. Absences date from the day of opening announced in the calendar.

Absence from a Test

Unexcused absence from a previously announced test may incur the penalty of a failure in that particular test.

Transfer within the University

A student who wishes to transfer from one college of the University to another must make application to the Dean of the college to which he desires to transfer. If the application is approved, arrangements for the transfer will be made.

Transfers should be arranged at least one month before the opening of a session.

Withdrawal from Courses

If a student withdraws from any or all courses without permission of the Dean or the Registrar, he receives an automatic failure. *Permission will be given only when application is made within two weeks after discontinuance of attendance or from the corresponding portion of a summer session.*

The student who withdraws from any or all courses with the requisite permission receives a grade of W. See Grading System.

Withdrawal from the University

A student who wishes to withdraw from the University must notify the office of the Dean or the Registrar either in person or in writing. *A student is considered to be in attendance until he has given this formal notice of withdrawal.*

A student will be obliged to withdraw for reasons of poor scholarship, failure to remove academic probation, or misconduct.

Xavier University reserves the right to require a student to withdraw if, in the judgment of University officials, such action would be beneficial to the physical, mental, emotional, or moral best interests of the student, or is considered necessary for the welfare of the University.

Honorable Dismissal

Honorable dismissal is voluntary withdrawal from the University *with the consent of the Dean or the Registrar*. A statement to such effect, indicative of the student's good standing so far as character and conduct are concerned, *will be issued only when all indebtedness to the University has been adjusted.*

Transcript Regulations

Application for a transcript of credits must be made in writing by the student himself and filed with the registrar *at least two weeks before the record is needed.*

Requests for transcripts for purpose of transfer to another university or for any other purpose cannot be granted during the busy periods of examination and registration.

Transcripts are issued only after the student has fulfilled all financial obligations to the University.

There is no charge for the first transcript. A fee of \$1.00 is charged for each additional transcript.

Since the Registrar's Office does not maintain Graduate School or Evening College records, students who have been registered in one of the undergraduate day colleges and later in the Graduate School or Evening College must apply to both the Registrar's Office and the Graduate School or Evening College when requesting transcripts.

Auditor

A student may audit a course if he has the written permission of the Dean. No one may change from the status of auditor to that of credit student, or from credit student to auditor after the date of assigning the grade of W passes.

With permission, juniors and seniors who are on the Dean's List may audit one extra course without charge. Others may enroll as auditors upon payment of the usual tuition. *Academic credit is never given to an auditor.*

Curricular Information

Degrees

The University will confer a bachelor's degree upon any candidate who has successfully completed an accepted program of studies, and who has fulfilled, prior to graduation, all degree requirements, both general and particular. Degrees conferred on candidates of the College of Arts and Sciences are the Bachelor of Arts, Honors Bachelor of Arts, Bachelor of Science, and Bachelor of Literature. Graduates of the College of Business Administration receive the Bachelor of Science in Business Administration.

Curricular Guidelines

1. Students entering Xavier University in and after September, 1969, will meet the new curricular requirements approved by the Board of Trustees on May 16, 1968. Those who enrolled before September, 1969, are expected to fulfill the curricular requirements stated in the 1968-1969 Catalogue.

2. Essentials of the new curriculum follow:

	Cr. Hrs.
Major Academic Subject	_____
—Hours vary according to the subject. See the department's requirements in the block schedules that follow.	
Supporting Courses	9/10
—Students in the College of Arts and Sciences, except those in physical education and education-science, must complete nine or ten hours in a foreign language, either classical or modern.	
English Composition	3
—unless the student passes the qualifying examination in writing skills. The course (En 101: English Composition), if it must be completed, will be worked into one of the semesters of freshman year. Credit for it applies as an unspecified elective if such exists in the degree program.	
Philosophy	15
—Non-majors, except H.A.B. students, choose one of six programs. During freshman, sophomore, and junior years, however, PI 220: Philosophy of Man, PI 230: Metaphysics, and PI 240: Principles of Ethics, are common to all programs.	
Theology	12
—Non-Catholic students complete only six hours—of their own choice.	
Courses, mostly elective, from three areas but exclusive of the student's major department:	
Humanities	12
—The Humanities: communication arts, fine arts, literature (classical, English, or a modern language, even in translation), and philosophy and Theology (beyond the fifteen and twelve required hours).	
—In the College of Arts and Sciences students must include six	

hours of literature as part of the Humanities area. Introductory foreign language courses do not meet this requirement.

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|---|-------|
| Mathematics-Science | 12 |
| —Undergraduates must complete six hours of one science and six hours of mathematics. (Majors in mathematics, however, need complete only six hours of one science.) | |
| Social Science | 12 |
| —The Social Sciences: economics, education, geography, history, political science, psychology, sociology, and all business administration subjects. | |
| —Students in the College of Arts and Sciences must include Hs 123, 124: History of Europe as part of the Social Science area. | |
| Unspecified Electives | _____ |
| —Students may use these to complete the total of 120 hours (or 126 with Military Science). | |
3. This is the new system of numbering courses:

100 to 199	Lower division courses
200 to 399	Upper division and graduate courses
400 to 499	Administrative use only
500 to 699	Courses for graduate students only
 4. Six-hour terminal science courses for non-science majors:

Bl 102-103, 104-105	General Biology
Ch 102-103, 104-105	Foundations of Chemistry
Ph 100, 101	Physics of Nature
Ph 102, 103	Elementary Astronomy
Ps 121-122, 123-124	General Experimental Psychology
 5. In selecting courses for the areas in the Humanities, in Mathematics-Science, in Social Science, and for the unspecified electives,
 - Students may register for any lower division (100 series) courses.
 - They may also elect all upper division CI courses, all PI courses after 220 and 230 (but note prerequisites), CA 203, 204, and 231, and other courses with the Dean's approval.
 6. Beginning in September, 1969, students will have at least one course in philosophy and one in Theology each year, in part as follows:

PI 220: Philosophy of Man	Th 101: Revelation and Christology
PI 230: Metaphysics	Th 102: Christian Life Within the Church
PI 240: Principles of Ethics	Th Elective

When class sections are filled, the preceding courses in philosophy and in Theology are interchangeable by semesters.

During their first years at the University, underclassmen, except majors in philosophy and H.A.B. candidates, will elect one program, to be completed in senior year, from these variables:

 - PI 241: Current Moral Problems
An elective from any other program.
 - PI 241: Current Moral Problems
Select one: PI 243: Principles of Political Philosophy,
or 244: Medical Ethics,
or 246: Business Ethics

- III. Pl 381: Contemporary Continental European Philosophy
- Pl 383: Contemporary British and American Philosophy
- IV. Select two: Pl 250: History of Ancient Philosophy
- Pl 260: History of Medieval Philosophy
- Pl 270: History of Modern Philosophy
- Pl 280: History of Contemporary Philosophy

- V. Pl 232: Philosophy of God
- Pl 235: Theory of Knowledge

- VI. Pl 210: Logic
- Pl 237: The Material World

Elective Courses in philosophy are listed in the block schedules in senior year as Program Electives.

—In Program I the elective may be taken after Pl 230 (unless Pl 240 is prerequisite).

In Program II the sequence is fixed.

In Program VI Pl 210 may be taken before or after Pl 220 and 230.

In Programs III, IV, and V the sequence after Pl 230 is optional except as prerequisites apply.

—The Chairman may authorize substitutions in courses other than Pl 220, 230, and 240.

—*H.A.B. students* will complete Pl 200, 220, 230, 240, 260, 270, and 280 (or 381 or 383).

—Majors in philosophy will follow the block schedule for philosophy.

- 7. Students majoring in CA, Ed, En, Hs, FL, Pl, Po, and Th may elect any lower division mathematics courses (but not both 121 and 122).

Requirements for Degrees

1. Candidates for undergraduate degrees must complete the curricular requirements listed under the preceding Curricular Guidelines.
2. Students must complete from six to fifteen hours of *lower division* work preparatory to the specialization of their choice.
3. They must also have no fewer than eighteen hours of *upper division* work in the major, in all of which they must attain an average of C.
4. They must have at least 120/126 hours with an overall average of C.
5. They must have an average of C in upper division courses.
6. They must have completed the last 32 hours *in residence* and with an average of C.
7. They must have filed formal application for the degree in the office of their college.
8. They must have taken the Graduate Record Examination (Advanced Test) in their major field if it is a departmental requirement.
9. They must have passed the comprehensive examination if in the College of Arts and Sciences—unless the department has a substitute requirement. (When a thesis is required, the original and one copy must be deposited in the Registrar's office on or before the date designated in the University Calendar in the Catalogue.)
10. They must have discharged all financial obligations to the University.
11. They must have agreed to be present at the Commencement.

Graduation Honors

Honors are awarded on the basis of outstanding attainment. A student who has earned a quality-point average of 3.75 in his college work will be graduated *Summa cum Laude*; one who has earned 3.5, *Magna cum Laude*; one who has earned 3.25, *cum Laude*. These honors are announced at commencement and are inscribed on the diplomas of those meriting them.

For students graduating in June, the final semester's work cannot be computed in determining the quality-point average for honors.

Transfer students are eligible for honors at graduation only under the following conditions:

1. They must have completed the last sixty-four semester hours of work at Xavier University.
2. Their quality-point average must be computed on the basis of *all of their college work*.
3. Under no circumstances will honors be awarded that are higher than the honors merited by the quality-point average earned at Xavier University.

Reservation of Rights

The University reserves the right to modify its graduation and other requirements as may seem necessary from time to time. It will be obligated only during the academic year of the student's registration by requirements published in the Catalogue for that year.

Students who interrupt their attendance and who later return must meet the curricular requirements in force at the time of their return.

Studies Outside the United States

Students who desire to spend a year abroad as part of their undergraduate education have a number of possibilities open to them. The student should consult the Chairman of the International Education Committee for available opportunities. The program sponsored by Loyola University, Chicago, at the Rome Center of Liberal Arts is especially recommended. Students who wish to spend their sophomore or junior year at the Rome Center are urged to request information in the first semester of the previous year. A full complement of courses is taught by faculty from Loyola and other American and European universities. The transcript of credits is issued from Loyola, Chicago. Xavier University is an affiliate of Loyola University in sponsoring the year abroad at the Rome Center.

For the student's convenience, specific information about the purposes of, and the requirements for, the various degree programs is given on the following pages. A block schedule, suggesting the student's sequence of courses, is also presented. The student may increase his or her course load with the Dean's consent.

Degree Programs— The College of Arts and Sciences

THE HONORS BACHELOR OF ARTS

The Honors Bachelor of Arts is awarded to students who have completed the entire Honors program of the University. This curriculum was instituted in the belief that its values meet the needs of the day for Christian humanism. It attempts to build a security based on those things that are themselves secure—the great languages and their literatures; the nature of science; the history of human thought and action; philosophy, by which men come to understand themselves, the ways of God with humankind, their dignity as men, and their obligations to their fellowmen.

Only those ranking high in their high school graduating classes will be admitted to the Honors program. A special board of admissions passes on the fitness of applicants. In doubtful cases applicants will take special examinations to determine their qualifications for the program.

In addition to the regular requirements for admission to the University, students accepted for the Honors course must have four units of Latin, and it is desirable that they have two units of Greek.

It will be noted that the possibility of at least thirty-three elective hours enables the superior student, in addition to completing an intensive course in the liberal arts, to cover the pre-medical requirements or to do concentrated work in a major field—classics, economics, English, history, the modern languages, philosophy, or psychology.

The minimum requirements:

English	12	Mathematics*	6
Greek (or Modern Language).....	18-22	Philosophy	21
History	12	Science**	8-9
History of Classical Lit.....	6	Theology	12
Latin	21	Electives†	33

* The six hours of mathematics include Calculus I and II.

** The science requirement may be fulfilled by taking either General Zoology or General Chemistry.

† Students need not take all thirty-three hours of electives; or, with permission, they may take more than thirty-three hours.

Honors Bachelor of Art

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
En	3	En	3
Gk 172—Plato* or	3	Gk 162—Euripides or	3
Gk 101—Elem. Greek	5	Gk 102—Intro. to Greek Lit.....	5
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Lt 128—Cicero	3	Lt 153—Virgil: <i>Aeneid</i> VII-XII.....	3
Mt 120—Calculus I	3	Mt 121—Calculus (Scientific)	3
**Total		**Total	
15-17		15-17	

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 110—Gen. Zoology I.....	2	Bl 112—Gen. Zoology II.....	2
Bl 111—Gen. Zoology I Lab or.....	2	Bl 113—Gen. Zoology II Lab or....	2
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chemistry I Lab.....	1	Ch 113—Gen. Chemistry II Lab....	2
Gk 260—Sophocles	3	Gk 331—Thucydides	3
Lt 313—Latin Comp.	3	Lt 231—Horace: <i>Odes</i>	3
Pl 200—Origins of Phil.....	3	Pl 220—Phil. of Man	3
Th 101—Christology	3	Th 102—Christian Life	3
Elective A	3	Elective B	3
Total		Total	
19		19-20	

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
En	3	En	3
Gk 371—Plato: <i>Republic</i>	3	Gk 251—Homer: <i>Iliad</i>	3
Hs—Elective	3	Hs—Elective	3
Lt 391—Lucretius	3	Lt 312—Tacitus: <i>Annals</i>	3
Pl 230—Metaphysics	3	Pl 240—Prins. of Ethics.....	3
Th—Elective	3	Electives D, E.....	6
Elective C	3		
Total		Total	
15-21		15-21	

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Gk 388—Hist. of Greek Lit.....	3	Lt 388—Hist. of Latin Lit.....	3
Lt 261—Roman Comedy	3	Pl 270—Modern Phil.	3
Pl 260—Medieval Phil.	3	Pl 280—Contemporary Phil.	3
Th—Elective	3	Th—Elective	3
Electives F, G, H	9	Electives I, J, K	9
Total		Total	
12-21		12-21	

* Students having two units of high school Greek, or its equivalent, will register for Gk 172. Others will take Gk 101.

** Those not taking Gk 101, 102 ordinarily elect a modern language.

THE BACHELOR OF SCIENCE (Biology)

The biology curriculum includes a core presenting current concepts of the molecular, cellular, organismal, and population levels of biological organization. It also offers electives to encourage students to acquire some depth in these areas. Lectures and laboratory procedures present basic biological principles, experience in careful observation, controlled experimentation, and thoughtful analysis of scientific data.

A student's program contributes to his liberal arts education and prepares him for career opportunities:

1. Graduate study
2. Entrance to schools of medicine, dentistry, veterinary medicine, and optometry
3. Teaching biology at the high school level
4. Specialized employment

Students planning graduate study, teaching, or similar employment complete General Biology, General Botany, Genetics, General Physiology, and Methods of Biological Research (20 hours) and 16 hours of Bl electives.

Those going to medical or dental schools complete General Zoology, Microbiology or General Botany, Genetics, General Physiology, and Methods of Biological Research (20 hours), twelve recommended hours including Embryology, Comparative Anatomy, Vertebrate Histology, and four hours of Bl electives.

Majors must complete two semesters of physics, four of chemistry (through organic), and two of mathematics (statistics and calculus). The Chairman advises students as to course sequence and prerequisites for courses. With his approval, majors may substitute courses to fulfill requirements.

Program requirements are:

		<i>Sem. Hrs.</i>				<i>Sem. Hrs.</i>	
<i>Subject</i>		<i>L.D.</i>	<i>U.D.</i>	<i>Subject</i>		<i>L.D.</i>	<i>U.D.</i>
Biology		8	28	Modern Language		10	—
Chemistry		9	8	Philosophy		—	15
History		6	—	Physics		8	—
Humanities		12	—	Social Science		6	—
Mathematics		6	—	Theology		6	6

B.S. (Biology)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 110—Gen. Zoology I	2	Bl 112—Gen. Zoology II	2
Bl 111—Gen. Zoology I Lab	2	Bl 113—Gen. Zoology II Lab	2
Ch 110—Gen. Chemistry I	3	Ch 112—Gen. Chemistry II	3
Ch 111—Gen. Chemistry I Lab	1	Ch 113—Gen. Chemistry II Lab	1
Mt 101—Statistical Inference	3	Mt 121—Calculus (Science)	3
Th 101—Christology	3	Pl 220—Phil. of Man	3
Total	14	Total	14

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 120—Gen. Botany	2	Bl 300 or 260 or 240 or 230	2-4
Bl 121—Gen. Botany Lab	2	Hs 124—Europe Since 1648	3
Hs 123—Europe to 1648	3	Pl 230—Metaphysics	3
Ph 104—College Physics	3	Ph 106—College Physics	3
Ph 105—College Physics Lab	1	Ph 107—College Physics Lab	1
Th 102—Christian Life	3		
Total	14	Total	12-14

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 310 or 250	4	Bl 230 or 300 or 260 or 240	2-4
Ch 101—Organic Chemistry	4	Ch 102—Organic Chemistry	4
Ml 100	5	Ml 101	5
Th—Elective	3	Humanities Elective	3
Humanities Elective	3	Pl 240—Prins. of Ethics	3
Total	19	Total	17-19

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 360—Gen. Vert. Physiology	2	Bl—Elective	4
Bl 361—Gen. Vert. Physiology Lab	2	Bl 399—Biol. Res. II	1
Bl 398—Biol. Res. I	1	Humanities Electives	6
Bl—Elective	4	Pl—Program Elective	3
Social Science Elective	3	Social Science Elective	3
Th—Elective	3		
Pl—Program Elective	3		
Total	18	Total	17

THE BACHELOR OF SCIENCE (Chemistry)

The Department of Chemistry offers a comprehensive curriculum leading to the Bachelor of Science. The program covers the four major fields (inorganic, analytical, organic, and physical chemistry), the preparation and identification of compounds, and the literature on the subject. Ch 190 (Chemical Literature) fits the student to prepare his thesis and amounts to a beginning course in research.

Xavier University is approved by the American Chemical Society for its training in chemistry.*

Departmental requirements for a major include:

The completion of Ch 110, 111, 112, 113, 130, 131, 132, 133, 140, 141, 142, 143, 190, 230, 250, 260, 261, 280, 281, and one of the following: Ch 320, 340, or 370.

2. A senior research project culminating in a written thesis, Ch 298, 299.

The minimum program requirements follow:

<i>Sem. Hrs.</i>		<i>Sem. Hrs.</i>	
<i>Subject</i>	<i>L.D. U.D.</i>	<i>Subject</i>	<i>L.D. U.D.</i>
Chemistry	26 18	Philosophy	— 15
German**	10 —	Physics	8 —
Humanities	12 —	Social Studies	6 —
History	6 —	Theology	6 6
Mathematics	9 6		

* Students completing the approved program of studies are graduated as "certified" chemistry majors.

** Russian may be substituted for German.

B.S. (Chemistry)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chemistry I Lab....	1	Ch 113—Gen. Chemistry II Lab....	2
Mt 120—Calculus I*.....	3	Mt 130—Calculus II	3
Hs 123—Europe to 1648.....	3	Hs 134—Europe Since 1648.....	3
Humanities Elective	3	Humanities Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man	3
Total	16	Total	17

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 130—Physical Chemistry I.....	3	Ch 132—Physical Chemistry II.....	3
Ch 131—Physical Chemistry I Lab 1	1	Ch 133—Physical Chemistry II Lab 1	1
Mt 110—Vectors and Geometry....	3	Mt 220—Advanced Calculus I.....	3
Ph 108—Univ. Physics I.....	3	Ph 110—Univ. Physics II.....	3
Ph 109—Univ. Physics I Lab	1	Ph 111—Univ. Physics II Lab.....	1
Th 102—Christian Life	3	Humanities Elective	3
Total	14	Pl 230—Metaphysics	3
		Total	17

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 140—Organic Chemistry I.....	3	Ch 142—Organic Chemistry II.....	3
Ch 141—Organic Chemistry I Lab 1	1	Ch 143—Organic Chemistry II Lab 1	1
Ch 280—Instrumental Analysis	3	Ch 281—Instrumental Analysis Lab 2	2
Gr 100—German I	5	Ch 190—Chemical Literature	1
Mt 230—Advanced Calculus II.....	3	Ch 230—Physical Chemistry III....	2
Th—Elective	3	Gr 102—Scientific German	5
Total	18	Pl 240—Prins. of Ethics.....	3
		Total	17

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 250—Qual. Organic Anal.....	3	Ch 320, 340 or 370.....	2-3
Ch 260—Inorganic Chemistry	3	Ch 299—Senior Research II.....	1
Ch 261—Inorganic Chemistry Lab 1	1	Pl—Program Elective	6
Ch 298—Senior Research I.....	1	Social Sciences Elective.....	3
Th—Elective	3	Humanities Elective	3
Social Sciences Elective.....	3		
Total	14	Total	15/16

* If a student has advanced standing in the calculus, he will begin his mathematics courses with Mt 130 or Mt 110. Upper division courses beyond Mt 130 will be selected with the assistance of his departmental advisor. If the entering student has a serious mathematics deficiency, he may be required to take Mt 100: Algebra and Trigonometry.

THE BACHELOR OF ARTS (Classics)

The Bachelor of Arts degree is conferred upon students who have satisfactorily completed thirty hours of Latin (with an average of C or better) and ten of a modern language or of Greek, along with the hours in the various fields indicated below.

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Latin	9	21	Philosophy	—	15
History	6	—	Science	6	—
Humanities	12	—	Social Science	6	—
Mathematics	6	—	Theology	6	6
Modern Language			Electives	18/24	—
or Greek	9-10	—			

A.B. (Classics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Lt 126—Cicero	3	Lt 151— <i>Aeneid</i> I-VI	3
ML or Gk	5/3	ML or Gk	5/3
Mt 120—Calculus I	3	Mt 130—Calculus II	3
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	17-15	Total	17-15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Humanities Elective	3
Lt 131—Horace	3	Lt—Directed	3
Gk or Elective A	3	Gk or Elective B	3
Science Elective	3	Science Elective	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Lt	3	Lt	3
Lt	3	Lt	3
Social Science Elective.....	3	Social Science Elective.....	3
Th—Elective	3	Pl 240—Prins. of Ethics.....	3
Gk or Elective C.....	3	Gk or Elective D.....	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Lt	3	Lt	3
Electives E, F.....	6	Electives G, H	6
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3	Lt	3
Total	15	Total	15

THE BACHELOR OF SCIENCE (Communication Arts)

The Department of Communication Arts develops the effective and responsible skills in communication that man as a social being needs.

Majors acquire knowledge of the various aspects of communication—its techniques, problems, principles, philosophy, and role in today's world. Building upon the liberal arts and a liberal approach, students gain general competence through Oral Communication, Voice and Diction, Oral Interpretation, Survey of Mass Media, Communication Theory, and Social Dynamics of Communication. Their concentration consists of twelve credit hours in one of the forms of communication—speech, theatre, film, radio and television, journalism, or public relations. A senior project and a senior comprehensive examination complete the degree program.

Specific degree requirements follow:

<i>Subject</i>	<i>Sem. Hrs.</i>		<i>Subject</i>	<i>Sem. Hrs.</i>	
	<i>L.D.</i>	<i>U.D.</i>		<i>L.D.</i>	<i>U.D.</i>
Communication Arts	6	24	Philosophy	—	15
History	6	—	Theology	6	6
Humanities	12	—	Social Science	6	—
Mathematics	6	—	Science	6	—
Foreign Language	10	—	Electives	18	—

B.S. (Communication Arts)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
CA 101—Oral Communication	3	CA 102—Voice and Diction	3
FL	5	FL	5
Science Elective	3	Science Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man	3
Total	14	Total	14

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
CA 203—Communication Theory	3	CA 201—Oral Interpretation	3
Hs 123—Europe to 1648	3	Hs 124—Europe Since 1648	3
Mt—Elective	3	Mt—Elective	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
CA 202—Survey of Mass Media	3	CA 204—Soc. Dynamics of Com.	3
CA—Elective A	3	CA—Elective B	3
Th—Elective	3	Pl 240—Prins. of Ethics	3
Social Science Elective	3	Social Science Elective	3
Elective A	3	Electives B, C	6
Total	15	Total	18

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
CA—Elective C	3	CA—Elective D	3
Elective D	3	Elective E, F	6
Humanities Elective	3	Humanities Elective	3
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3		
Total	15	Total	15

THE BACHELOR OF ARTS (Economics)

A Bachelor of Arts degree in economics is offered those who wish to take the traditional liberal arts program. The curriculum of an economics major is designed to satisfy the student's desire for a broad liberal arts background, and to provide a general, but thorough, understanding and appreciation of economic activity.

Students majoring in economics must complete these specific courses:

Course No.	Subject	Sem. Hrs.
Ec 100, 101	Principles of Economics.....	6
Ec 122	Calculus	3
Ec 210	Human Resources	3
Ec 200	Microeconomic Analysis	3
Ec 201	Macroeconomic Analysis	3
Ec 202	History of Economic Thought.....	3
Ec 345	International Economics	3
Ec 250	Money and Banking	3
Ec	Economics Electives	6
Total		33

Prescribed subjects and credit hours required by the B.S. (Economics) follow:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Economics	6 27	Philosophy	— 15
Business Administration...	3 —	Theology	6 6
History	6 —	Science	6 —
Humanities	12 —	Social Science	6 —
Mathematics*	6 3	Electives	12 —
Modern Language	10 —		

* For candidacy in the Department, student must have completed the requirements for Mt 232 and Ec/Mt 122.

A.B. (Economics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
ML	5	ML	5
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Humanities Elective	3	Humanities Elective	3
Total	14	Total	14

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 100—Prins. of Economics.....	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math	3	Mt 122—Calculus (Business)	3
Science Elective	3	Science Elective	3
Humanities Elective	3	Humanities Elective	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 200—Microeconomics	3	Ec 201—Macroeconomics	3
Ec 232—Math. for Economists	3	Ec 202—Hist. of Econ. Thought....	3
Ec 250—Money and Banking.....	3	BA 270—Business Statistics	3
Social Science Elective.....	3	Social Science Elective.....	3
Th—Elective	3	Pl 240—Prins. of Ethics.....	3
Elective A	3		
Total	18	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec—Elective	3	Ec—Elective	3
Ec 210—Human Resources	3	Ec 345—International Econ.	3
Elective B	3	Electives C, D.....	6
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3		
Total	15	Total	15

TEACHER CERTIFICATION—Secondary Schools

The courses in education, planned to provide the required preparation for teaching in secondary schools, are open to students majoring in any department.

The minimum professional requirements for high school certification in Ohio are:

1. For the teaching of any subject: Ed 131, 141, 201, 202, 203.
2. For teaching health and physical education: B1 106-107, 108-109, Ed 372, 373, 374, 375, 377, 378, 379, 380, 381, 382. Ed 370, 371, 376 may be used as open electives and are recommended. These courses and those listed under 1. constitute a major in physical education and lead to the Bachelor of Science.
3. For teaching other subjects (history, English, etc.), the student must consult the specific state requirements for each subject. Copies of these requirements may be secured in the Teacher Education and Placement Office, 14 Alter Hall.

Each student must be formally accepted in writing into the teacher education program before he takes his first course in education. This acceptance is given in the Teacher Education and Placement Office, 14 Alter Hall. Prior to the semester in which he plans to do student teaching, he must receive formal acceptance from the Director of Student Teaching, 14 Alter Hall.

Students in the Physical Education program must complete the same two steps in the Physical Education Office, in the Fieldhouse.

Students desirous of meeting professional requirements of other states, should obtain an official statement of specific requirements from the Department of Education of their respective states, and consult the Teacher Education and Placement Office before registering for courses in education.

THE BACHELOR OF SCIENCE (Physical Education)

The minimum program requirements for the Bachelor of Science in Physical Education are:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Education	6	31	Philosophy	—	15
History	6	—	Psychology	3	—
Humanities	12	—	Science	6	—
Modern Language	10	—	Second Field	15	—
or Mathematics	6	—	Theology	6	6

B.S. (Physical Education)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 106—Human Anatomy I*	2	Bl 108—Human Anatomy II	2
Bl 107—Human Anatomy I Lab	1	Bl 109—Human Anatomy II Lab	1
Hs 123—Europe to 1648	3	Hs 124—Europe Since 1648	3
Mt	3	Mt	3
Th 101—Christology	3	Pl 220—Phil. of Man	3
Elective A (or En 101)	3	Ps 101—Gen. Psychology	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed 131—Prins. of Education	3	Ed 141—Ed. Psychology	3
Ed 377—Admin. of Phys. Ed.*	3	Ed 378—Admin. of Health Ed	3
Humanities Elective	3	Humanities Elective	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Second Teaching Field	3	Second Teaching Field	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed 374—Coaching: Baseball	1	Ed 375—Coaching: Track	1
Ed 381—Health and Hygiene	2	Ed 382—Health and Hygiene	2
Ed 201—Secondary Methods	3	Ed 202—Secondary Curriculum	2
Ed 379—Phys. Ed. Methods	2	Ed 380—Phys. Ed. Methods	2
Humanities Elective	3	Humanities Elective	3
Th—Elective	3	Pl 240—Prins. of Ethics	3
Second Teaching Field	3	Second Teaching Field	3
Total	17	Total	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed 203—Student Teaching**	6	Electives B, C	6
Ed 372—Coaching: Football	2	Ed 373—Coaching: Basketball	2
Th—Elective	3	Pl—Program Electives	6
Second Teaching Field	3		
Total	14	Total	14

* Bl 106, 107, 108, 109 will be offered every other year, alternating with Ed 377, 378 in the freshman and sophomore program.

** Student Teaching may be taken in either semester of senior year, alternating with Electives B and C. These electives may complete the second teaching field or serve as free electives.

B.S. (Teaching Biology and General Science)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 110—Gen. Zoology I.....	2	Bl 112—Gen. Zoology II.....	2
Bl 111—Gen. Zoology I Lab.....	2	Bl 113—Gen. Zoology II Lab.....	2
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Humanities Elective	3	Mt 120—Calculus I	3
Mt 100—Algebra and Trig.....	3	Ps 101—Gen. Psychology	3
Pl 220—Phil. of Man.....	3	Th 101—Christology	3
Total	16	Total	16

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 120—Gen. Botany	2	Bl 230—Genetics	2
Bl 121—Gen. Botany Lab	2	Bl 231—Genetics Lab	2
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chemistry I Lab.....	1	Ch 113—Gen. Chemistry II Lab.....	2
Ed 131—Prins. of Education.....	3	Ed 141—Educational Psychology.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Total	14	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl—Elective	3	Bl 240—Evolution	2
Bl—Elective Lab	1	Ed 202—Secondary Curriculum	2
Ed 201—Secondary Methods	3	Humanities Elective	3
Humanities Elective	3	Ph 106—College Physics	3
Ph 104—College Physics	3	Ph 107—College Physics Lab.....	1
Ph 105—College Physics	1	Th—Elective	3
Pl 240—Prins. of Ethics	3	Total	14
Total	17	Total	14

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 360—Gen. Vertebrate Phys.....	2	Ed 203—Student Teaching*	6
Bl 361—Gen. Vertebrate Phys. Lab 2		Pl—Program Elective	3
Humanities Elective	3	Elective B	3
Pl—Program Elective	3	Th—Elective	3
Elective A	3	Total	15
Total	13	Total	15

* May be taken in either semester. Interchangeable with philosophy and elective courses.

B.S. (Teaching of Chemistry and Mathematics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Humanities Elective	3	Mt 120—Calculus I	3
Mt 100—Algebra and Trig.....	3	Ps 101—Gen. Psychology	3
Pl 220—Phil. of Man.....	3	Th 101—Christology	3
Ph 104—College Physics	3	Ph 106—College Physics	3
Ph 105—College Phys. Lab.....	1	Ph 107—College Phys. Lab.....	1
Total	16	Total	16

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chem. I Lab.....	1	Ch 113—Gen. Chem. II Lab.....	2
Ed 131—Prins. of Education.....	3	Ed 141—Educational Psych.	3
Mt 121—Calculus (Scientific)	3	Mt 110—Vectors and Geometry.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Total	13	Total	14

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 140—Organic Chemistry I.....	3	Ch 142—Organic Chem. II.....	3
Ch 141—Organic Chem. I Lab.....	1	Ch 143—Organic Chem. II Lab.....	1
Ed 201—Secondary Methods	3	Ed 202—Secondary Curriculum	2
Mt 220—Adv. Calculus I.....	3	Mt—Elective	3
Pl 240—Prins. of Ethics.....	3	Th—Elective	3
Humanities Elective	3	Humanities Elective	3
Total	16	Total	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 130—Physical Chem. I.....	3	Ch 190—Chemical Lit.	1
Ch 131—Physical Chem. I Lab.....	1	Ch 320—Intro. Radiochemistry	2
Ed 203—Student Teaching*	6	Pl—Program Elective	3
Humanities Elective	3	Th—Elective	3
Pl—Program Elective	3	Electives A, B.....	6
Total	16	Total	15

* May be taken in either semester. Interchangeable with philosophy and elective courses.

B.S. (Teaching General Science and Mathematics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 110—Gen. Zoology I.....	2	Hs 124—Europe Since 1648.....	3
Bl 111—Gen. Zoology I Lab.....	2	Humanities Elective.....	3
Hs 123—Europe to 1648.....	3	Mt 120—Calculus I.....	3
Humanities Elective.....	3	Ps 101—Gen. Psychology.....	3
Mt 100—Algebra and Trig.....	3	Th 101—Christology.....	3
Pl 220—Phil. of Man.....	3		
Total	16	Total	15

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 120—Gen. Botany.....	2	Ch 112—Gen. Chemistry II.....	3
Bl 121—Gen. Botany Lab.....	2	Ch 113—Gen. Chemistry II Lab.....	1
Ch 110—Gen. Chemistry I.....	3	Mt 110—Vectors and Geometry.....	3
Ch 111—Gen. Chemistry I Lab.....	1	Th 102—Christian Life.....	3
Pl 230—Metaphysics.....	3	Elective A.....	3
Mt 121—Calculus (Scientific).....	3	Elective B.....	2
Total	14	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ed 131—Prins. of Education.....	3	Ed 141—Educational Psychology.....	3
Ed 201—Secondary Methods.....	3	Mt—Elective.....	3
Mt 220—Adv. Calculus I.....	3	Ph 106—College Physics.....	3
Ph 104—College Physics.....	3	Ph 107—College Physics Lab.....	1
Ph 105—College Physics Lab.....	1	Th—Elective.....	3
Pl 240—Prins. of Ethics.....	3	Elective C.....	3
Total	16	Total	16

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Humanities Elective.....	3	Ed 202—Secondary Curriculum.....	2
Pl—Program Electives.....	6	Ed 203—Student Teaching*.....	6
Electives D, E.....	6	Humanities Elective.....	3
		Th—Elective.....	3
Total	15	Total	14

* May be taken in either semester. Interchangeable with philosophy and elective courses.

B.S. (Teaching Physics and Mathematics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Humanities Elective.....	3	Mt 120—Calculus I.....	3
Mt 100—Algebra and Trig.....	3	Ph 106—College Physics.....	3
Ph 104—College Physics.....	3	Ph 107—College Physics Lab.....	1
Ph 105—College Physics Lab.....	1	Ps 101—Gen. Psychology.....	3
Pl 220—Phil. of Man.....	3	Th 101—Christology.....	3
Total	16	Total	16

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chemistry I Lab.....	1	Ch 113—Gen. Chemistry II Lab.....	1
Humanities Elective.....	3	Humanities Elective.....	3
Ed 131—Prins. of Education.....	3	Ed 141—Educational Psychology.....	3
Mt 121—Calculus (Scientific).....	3	Mt 110—Vectors and Geometry.....	3
Pl 230—Metaphysics.....	3	Th 102—Christian Life.....	3
Total	16	Total	16

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ed 201—Secondary Methods.....	3	Ed 202—Secondary Curriculum.....	2
Mt 220—Adv. Calculus I.....	3	Humanities Elective.....	3
Ph 200—Basic Mechanics.....	3	Mt—Elective.....	3
Pl 240—Prins. of Ethics.....	3	Ph 201—Basic Optics.....	3
Elective A.....	3	Th—Elective.....	3
Total	15	Total	14

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ph 102—Elem. Astronomy.....	3	Ed 203—Student Teaching*.....	6
Ph 202—Basic Elect. and Magnet.....	3	Ph 103—Elem. Astronomy.....	3
Pl—Program Electives.....	6	Ph—Special Readings.....	1
Elective B.....	3	Th—Elective.....	3
Total	15	Total	13

* May be taken in either semester. Interchangeable with philosophy and elective courses

B.S. (Teaching Science: Comprehensive)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Humanities Elective.....	3	Mt 120—Calculus I.....	3
Mt 100—Algebra and Trig.....	3	Ps 101—Gen. Psychology.....	3
Pl 220—Phil. of Man.....	3	Science A.....	3
Science A.....	3	Science A Lab.....	1-2
Science A Lab.....	1	Th 101—Christology.....	3
Total.....	16	Total.....	16-17

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Science A.....	3	Science A.....	3
Science A Lab.....	1	Science A Lab.....	1
Science B.....	3	Science B.....	3
Science B Lab.....	1	Science B Lab.....	1
Mt 121—Calculus (Scientific).....	3	Th 102—Christian Life.....	3
Pl 230—Metaphysics.....	3	Humanities Elective.....	3
Total.....	14	Total.....	14

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Science A.....	3	Science A.....	3
Science A Lab.....	1	Science A Lab.....	1
Science C.....	3	Science C.....	3
Science C Lab.....	1	Science C Lab.....	1
Ed 131—Prins. of Education.....	3	Ed 141—Educational Psychology.....	3
Ed 201—Secondary Methods.....	3	Ed 202—Secondary Curriculum.....	2
Pl 240—Prins. of Ethics.....	3	Th—Elective.....	3
Total.....	17	Total.....	16

Senior Year

Pl—Program Elective.....	3	Ed 203—Student Teaching*.....	6
Humanities Elective.....	6	Pl—Program Elective.....	3
Electives A, B.....	6	Elective C.....	3
Total.....	15	Total.....	12

* May be taken in either semester. Interchangeable with philosophy and elective courses.

Note: Some minor shifts may be made according to science chosen as Science A.

TEACHER EDUCATION—Elementary

As a consequence of the decision of the University in February, 1969, on coeducation, the Department of Education will institute a program in September, 1969, for the certification of elementary school teachers. The program is being developed to meet requirements of the State of Ohio. It will be available to freshmen and sophomores in September, 1969, and in individual instances it may also be open to juniors and seniors upon formal acceptance by the Director of Teacher Education, Alter Building, Room 14. A detailed outline of the program may be secured from the same office.

THE BACHELOR OF ARTS (English)

The Department of English offers training in composition, in the literature of England and of America, in literary backgrounds, and in criticism. The program results in cultural enrichment and in numerous vocational possibilities.

The following is a regulation passed by the Academic Council:

"The violation of any of the ESSENTIALS FOR WRITING (list submitted by the Department of English) in term papers or reports submitted by students to any professor must be penalized by a reduction in grade. Any unsatisfactory term paper or report submitted to any professor must be returned for re-writing and must be automatically penalized by the reduction of one letter in grading, e.g., a B paper automatically becomes a C paper."

In the judgment of any professor, a student whose written work is unsatisfactory in grammar, orthography, or syntax may be required to repeat En 101 at any time during his undergraduate education. He must then pass successfully the proficiency examination in English given at stated times during the academic year.

English majors must take En 113, 114, 131, and 132 as preparatory to upper-division work. On the upper-division level they must complete En 380 and 381 (or En 382 and 383) and at least one course in Shakespeare (En 325, 326, or 327). Other courses should be chosen according to the student's interest and his post-graduation plans.

During their junior and senior years, English majors must work with an assigned member of the department to prepare for their senior comprehensive examination. The basis for their guidance is the *Guide for English Majors*, available in the Xavier University Book Store.

Students who wish to be certified as teachers of English on the secondary level must take En 200 and six other hours of composition or the history of the English language. In addition, they are advised to take the other lower division courses taken by the English majors as well as En 380 and En 381 (or 382 and 383).

A summary of the curriculum follows:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
English	12 24	Philosophy	— 15
History	6 —	Science	6 —
Humanities	12 —	Social Science	6 —
Mathematics	6 —	Theology	6 6
Modern Language	10 —	Electives	12 —

A.B. (English)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 113—Rhetoric and Lit.....	3	En 114—Rhetoric and Lit.....	3
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
FL	5	FL	5
Science Elective	3	Science Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	17	Total	17

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 131—Survey of En. Lit.....	3	En 132—Survey of En. Drama.....	3
Humanities Elective	3	Humanities Elective	3
Mt	3	Mt	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Elective A	3	Elective B	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 325—Shakespeare	3	En—Elective A	3
En 380—Amer. Lit. to 1865.....	3	En 381—Amer. Lit. Since 1865.....	3
Humanities Elective	3	Humanities Elective	3
Th—Elective	3	Pl 240—Prins. of Ethics.....	3
Social Science Elective.....	3	Social Science Elective.....	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En—Electives B, C.....	6	En Electives D, E.....	6
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3	Elective D	3
Elective C	3		
Total	15	Total	12

THE BACHELOR OF ARTS (History)

The Bachelor of Arts, conferred on history majors, requires Hs 123, 124, 341, 342, 294 (second semester, senior year), and five additional courses. Seminars for seniors planning graduate study in history are offered in aspects of the history of the United States, Europe, Latin America, and Asia.

History is studied as a liberal art for its primary value of educating one toward proper appreciation of human living. Its memory of man and its insistence on accurate detail, on proof, and on the relation of cause and effect cultivate habits of mature judgment. It helps toward developing due respect and sympathy for others, and supreme regard for the final purpose of life.

A Senior Comprehensive Examination, based on assigned readings, is required.

Specific degree requirements follow:

<i>Sem. Hrs.</i>		<i>Sem. Hrs.</i>	
<i>Subject</i>	<i>L.D. U.D.</i>	<i>Subject</i>	<i>L.D. U.D.</i>
History	6 24	Science	6 —
Humanities	12 —	Social Science	12 —
Mathematics	6 —	Theology	6 6
Modern Language	10 —	Electives	12 —
Philosophy	— 15		

A.B. (History)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
FL	5	FL	5
Science Elective	3	Science Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man	3
Total	14	Total	14

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 341—U.S. to 1865.....	3	Hs 342—U.S. Since 1865.....	3
Humanities Elective	3	Humanities Elective	3
Mt	3	Mt	3
Social Science Elective.....	3	Social Science Elective.....	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs—Electives A, B.....	6	Hs—Electives C, D.....	6
Humanities Elective	3	Humanities Elective	3
Th—Elective	3	Pl 240—Prins. of Ethics.....	3
Social Science Elective.....	3	Social Science Elective.....	3
Total	15	Total	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs—Electives E, F.....	6	Hs—Elective G	3
Pl—Program Elective	3	Hs 294—Historical Criticism	3
Th—Elective	3	Pl—Program Elective	3
Electives A, B.....	6	Electives C, D.....	6
Total	18	Total	15

THE BACHELOR OF SCIENCE (Mathematics)

The Department of Mathematics offers a program intended to develop exact methods of thought and analysis, provide the mathematical background for work in science and business, and prepare students for teaching and for graduate work.

Sophomores wishing to major in mathematics should have a quality point average of 2.5 or better in Mt 110, 120 and 130. Any student wishing to major in mathematics should consult a member of the mathematics staff before registration.

The program is summarized:

<i>Sem. Hrs.</i>		<i>Sem. Hrs.</i>	
<i>Subject</i>	<i>L.D. U.D.</i>	<i>Subject</i>	<i>L.D. U.D.</i>
Mathematics	9-12 27	Philosophy	— 15
Science	6 —	Social Science	6 —
History	6 —	Theology	6 6
Humanities	12 —	Electives	18 —
Modern Language	10 —		

B.S. (Mathematics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Mt 120—Calculus I	3	Mt 130—Calculus II	3
FL	5	Mt 110—Vectors and Geometry.....	3
Pl 220—Phil. of Man.....	3	FL	5
		Th 101—Christology	3
Total	14	Total	17

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Humanities Elective	3	Elective A	3
Mt 210—Intro. to Infinite Series.....	3	Humanities Elective	3
Mt 220—Adv. Calculus I.....	3	Mt 230—Adv. Calculus II.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Science Elective	3	Science Elective	3
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Elective B	3	Elective C	3
Humanities Elective	3	Humanities Elective	3
Mt 240—Matrices, Vector	3	Mt 250—Intro. to Mod. Algebra.....	3
Pl 240—Prins. of Ethics.....	3	Th—Elective	3
Social Science	3	Social Science	3
Total	15	Total	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Elective D	3	Electives E, F.....	6
Mt 260—Elem. Topography	3	Mt 270—Interm. Analysis	3
Mt—Elective	3	Mt—Elective	3
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3		
Total	15	Total	15

THE BACHELOR OF ARTS (Modern Languages)

The Department of Modern Languages offers programs leading to the Bachelor of Arts in French, German, or Spanish.* The aim of the Department is to teach language as a means of introducing the student to another culture.

To prepare for the senior comprehensive examination, a requirement for graduation, majors will work during the junior and senior years with an assigned member of the Department.

An outline of the curriculum follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
French, German, or Spanish	10	27	Philosophy	—	15
History	6	—	Science	6	—
Humanities	12	—	Social Science	6	—
Mathematics	6	—	Theology	6	6
			Electives	21	—

* Lower division courses are offered in Russian.

A.B. (Modern Languages)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Hs 123—Europe to 1648	3	Hs 124—Europe Since 1648	3
ML	5	ML	5
Science Elective	3	Science Elective	3
Pl 220—Phil. of Man	3	Th 101—Christology	3
Total	15	Total	14

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Elective A	3	Elective B, C	6
Mt	3	Mt	3
ML 201—Adv. Composition	3	ML 233—ML Literature Survey	3
ML 232—ML Literature Survey	3	Th 102—Christian Life	3
Pl 230—Metaphysics	3		
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Humanities Elective	3
ML—Elective A*	3	ML—Elective B	3
Pl 240—Prins. of Ethics	3	Th—Elective	3
Electives D, E	6	Electives F, G	6
Total	15	Total	15

Senior Year

Humanities Elective	3	Humanities Elective	3
ML—Electives C, D	6	ML—Electives E, F	6
Pl—Program Elective	6	Th—Elective	3
Social Science Elective	3	Social Science Elective	3
Total	18	Total	15

* Students majoring in Spanish must choose Sp 234: Survey of Latin American Literature.

THE BACHELOR OF ARTS (Philosophy)

The undergraduate program in philosophy is intended to aid students to gain understanding in depth, to arrive at a true and unified view of all reality, and to form principles by which to evaluate the explanations proposed.

Majors will be expected to grasp the fundamental and unifying principles of reality and of understanding, the dignity of human nature, and the rational foundations of religion. They should acquire a broad but critical acquaintance with the positions advanced by the most important philosophers throughout history. They will complete a minimum of thirty-six hours in philosophy, taken in special or HIP sections when offered: PI 210 (or 310), 220, 230, 232, 237 (or 338), 235, 240, 250, 260, 270, and one of PI 280, 381, or 383. PI 398 and 399 will be offered as an optional non-credit aid to the student.

They also will take the Graduate Record Examination (advanced Philosophy or Scholastic Philosophy) and written and oral comprehensive examinations with satisfactory performance.

They are encouraged to include French and Latin which are of great importance for advanced study in philosophy.

A summary of requirements for the major follows:

<i>Subject</i>	<i>Sem. Hrs.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Philosophy	36	Mathematics	6
Theology	12	Science	6
History	6	Social Science	6
Humanities	12	Electives	27
Language (Classical or Modern).....	9-10		

The requisites of this program leave twenty-seven hours of electives—enough for a second concentration or specialization, which is strongly recommended rather than a wide dispersal of courses.

A.B. (Philosophy)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
FL	5	FL	5
Science Elective	3	Science Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	14	Total	14

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mt	3	Mt	3
Pl 230—Metaphysics	3	Pl 232—Phil. of God.....	3
Th 102—Christian Life	3	Electives C, D, E.....	9
Electives A, B.....	6		
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Pl 210—Logic or		Pl 235—Theory of Knowledge.....	3
Pl 310—Symbolic Logic	3	Pl 270—Hist of Modern Phil.....	3
Pl 237—Material World	3	Humanities Elective	3
Pl 250—Hist. of Ancient Phil. or....		Social Science Elective.....	3
Pl 260—Hist. of Medieval Phil.....	3	Elective F	3
Th—Elective	3		
Humanities Elective	3		
Social Science Elective.....	3		
Total	18	Total	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Pl 240—Prins. of Ethics.....	3	Pl 241—Current Moral Probs.....	3
Pl 250—Hist. of Ancient Phil. or....		Pl 280—Contemp. Phil. or.....	
Pl 260—Hist. of Medieval Phil.....	3	Pl 381—Contemp. Continental	
Humanities Elective	3	Phil. or	
Elective G	3	Pl 383—Contemp. Brit. and	
Th—Elective	3	Amer. Phil.	3
		Humanities Elective	3
		Electives H, I.....	6
Total	15	Total	15

THE BACHELOR OF SCIENCE (Physics)

The Department of Physics offers a curriculum leading to the Bachelor of Science in physics.

The educational benefits to be derived from a study of the science of physics are training in scientific method, acquaintance with the historical development of physical science, and a knowledge of the applications of physical laws which play so large a part in modern life. In all physics courses emphasis is laid on the intelligent comprehension of basic principles.

All physics majors are required to take a minimum of forty-six semester hours of physics. Courses are listed in the block schedule.

A working knowledge of algebra and trigonometry is assumed of freshman physics majors. Deficiencies in this area should be removed before the start of freshman course work.

With approval of the Departments of Chemistry and of Physics six credit hours in physical chemistry may be counted toward a major in physics.

The minimum requirements follow:

<i>Sem. Hrs.</i>			<i>Sem. Hrs.</i>		
<i>Subject</i>	<i>L.D.</i>	<i>U.D.</i>	<i>Subject</i>	<i>L.D.</i>	<i>U.D.</i>
Physics	14	32	Modern Language	10	—
Chemistry	8	—	Philosophy	—	15
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	6
Mathematics	6-9	9			

B.S. (Physics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 110—Gen. Chemistry I.....	3	Ch 112—Gen. Chemistry II.....	3
Ch 111—Gen. Chemistry I Lab.....	1	Ch 113—Gen. Chemistry II Lab.....	1
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Mt 120—Calculus I	3	Mt 130—Calculus II	3
Ph 108—University Physics I.....	3	Ph 110—University Physics II.....	3
Ph 109—University Physics I Lab	1	Ph 111—University Physics II Lab	1
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	17	Total	17

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
ML	5	ML	5
Mt 110—Vectors and Geometry.....	3	Mt 210—Intro. to Infinite Series....	3
Ph 230—Elec. Circuits	2	Ph 242—Electronics	2
Ph 231—Elec. Circuits Lab.....	1	Ph 243—Electronics Lab	1
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Humanities Elective	3	Humanities Elective	3
Total	17	Total	17

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mt 220—Advanced Calculus I.....	3	Mt 230—Advanced Calculus I.....	3
Ph 350—Theoret. Mechanics I.....	3	Ph 364—Physical Optics	3
Ph 351—Theoret. Mechanics I Lab	2	Ph 365—Physical Optics Lab.....	2
Ph 352—Electromagnetism I	3	Ph 366—Atomic Physics	3
Social Sciences Elective.....	3	Pl 240—Prins. of Ethics.....	3
Th—Elective	3	Social Sciences Elective.....	3
Total	17	Total	17

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Humanities Elective	3	Humanities Elective	3
Ph 374—Nuclear Physics	3	Ph 380—Theoret. Mechanics II.....	3
Ph 375—Atomic Physics Lab.....	1	Ph 381—Nuclear Physics Lab.....	1
Ph—Elective A	3	Ph—Elective B	3
Ph 378—Senior Comp. Review.....	1	Ph 384—Senior Comp. Review.....	1
Pl—Program Elective	3	Pl—Program Elective	3
Pl 338—Phil. of Science.....	3	Th—Elective	3
Total	17	Total	17

THE BACHELOR OF ARTS (Political Science)

The Department of History and Political Science offers the Bachelor of Arts in political science. This program requires Po 101, 102, 131, 132, either 348 or 349, and five additional courses.

Political science aims to produce a deep understanding of the functions and processes of political power, of the place of authority in society, of the use of freedom in human relations. Regard for institutional practice, to conserve freedom and employ sound social forces toward the perfecting of political action, is a prime purpose in the field. The American constitutional system will be given particular attention. A senior comprehensive examination is required.

A summary of the program follows:

<i>Subject</i>	<i>Sem. Hrs.</i>		<i>Subject</i>	<i>Sem. Hrs.</i>	
	<i>L.D.</i>	<i>U.D.</i>		<i>L.D.</i>	<i>U.D.</i>
Political Science	12	18	Philosophy	—	15
Foreign Language	10	—	Science	6	—
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	6
Mathematics	6	—	Electives	15	—

A.B. (Political Science)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
FL	5	FL	5
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Science Elective	3	Science Elective	3
Total	14	Total	14

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Elective A*	3	Elective B	3
Humanities Elective	3	Humanities Elective	3
Social Science Elective.....	3	Social Science Elective.....	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Po 101—Govt. in Society.....	3	Po 102—American Govt.	3
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mt	3	Mt	3
Elective C	3	Humanities Elective	3
Humanities Elective	3	Po 132—Mod. Political Phil.....	3
Po 131—Anc., Med., Political Phil.	3	Pl 240—Prins. of Ethics.....	3
Po—Elective A	3	Po—Elective B	3
Th—Elective	3		
Total	18	Total	15

Senior Year

Po 348—Const. Hist. of U.S. (or 349)	3	Po—Elective E	3
Po—Electives C, D.....	6	Electives D, E, F.....	9
Pl—Program Elective	3	Pl—Program Elective	3
Th—Elective	3		
Total	15	Total	15

* Suggested: Principles of Economics

THE BACHELOR OF SCIENCE (Psychology)

The Department of Psychology endeavors to acquaint students thoroughly with the content and methods of scientific psychology. While emphasizing the scientific approach in the understanding of human behavior and human personality, the psychology courses aim to show to the student that this branch of science is complementary to and compatible with a sound philosophy of human nature. In addition to the program leading to the Bachelor of Science in Psychology, the Department provides service courses to majors of other departments. The Bachelor of Science program in psychology aims to provide a general background for advanced studies in fields which presuppose understanding of human psychology such as clinical psychology, vocational and educational guidance, medicine, education, social work, and personnel work in business and industry.

Departmental requirements for a major are:

1. Completion of Ps 101 and 102 as an introduction to *upper division* work.
2. Twenty-seven credit hours in *upper division* courses including Ps 211, 221, 222, and 299.
3. Ten credit hours in French or German, unless substitution of another foreign language is approved by the Chairman of the Department of Psychology.
4. Satisfactory completion of Bl 110, 111, 112, 113 to fulfill the science requirement, unless substitution of other science courses is approved by the Chairman of the Department of Psychology.

A summary of program requirements follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Psychology	6	27	Philosophy	—	15
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	6
Mathematics	6	—	Science	8	—
Modern Language	10	—	Electives	12	—

B.S. (Psychology)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 110—Gen. Zoology I.....	2	Bl 112—Gen. Zoology II.....	2
Bl 111—Gen. Zoology I Lab.....	2	Bl 113—Gen. Zoology II Lab.....	2
Elective A	3	Elective B	3
ML	5	ML	5
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Mt 101—Statistical Inference	3	Mt 121—Calculus (Scientific).....	3
Ps 101—Gen. Psychology	3	Ps 102—Adv. Gen. Psychology.....	3
Humanities Elective	3	Ps—Elective A	3
Th 102—Christian Life	3	Pl 230—Metaphysics	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Humanities Elective	3
Social Science Elective.....	3	Social Science Elective.....	3
Ps—Electives B, C.....	6	Pl 240—Prins. of Ethics.....	3
Th—Elective	3	Ps—Electives D, E	6
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Pl—Program Elective	3
Pl—Program Elective	3	Ps—Electives H, I.....	6
Ps—Electives F, G.....	6	Electives C, D.....	6
Ps 299—Senior Comp. Review.....	2		
Th—Elective	3		
Total	17	Total	15

THE BACHELOR OF ARTS (Sociology)

As part of the new curriculum, a major in sociology, leading to the Bachelor of Arts, is being introduced.

The purpose of this major is to study the nature of society—its origin, its evolution, its forms, its institutions, its current principles and attitudes, and its directions.

A summary of the program follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Sociology	6	24	Philosophy	—	15
Foreign Language	10	—	Science	6	—
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	6
Mathematics	6	—	Electives	18	—

A.B. (Sociology)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Hs 123—Europe to 1648	3		Hs 124—Europe Since 1648	3	
FL	5		FL	5	
Th 101—Christology	3		Pl 220—Phil. of Man	3	
Science Elective	3		Science Elective	3	
Total	14		Total	14	

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Th 102—Christian Life	3		Pl 230—Metaphysics	3	
So 101—Intro. to Sociology	3		So	3	
Elective A	3		Elective B	3	
Humanities Elective	3		Humanities Elective	3	
Social Science Elective	3		Social Science Elective	3	
Total	15		Total	15	

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mt	3		Mt	3	
So—Elective A, B	6		Pl 240—Prins. of Ethics	3	
Th—Elective	3		So—Elective C, D	6	
Elective C	3		Humanities Elective	3	
Humanities Elective	3				
Total	18		Total	15	

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Pl—Program Elective	3		Pl—Program Elective	3	
So—Electives E, F, G	9		So—Elective H	3	
Th—Elective	3		Electives D, E, F	9	
Total	15		Total	15	

THE BACHELOR OF ARTS (Theology)

The Bachelor of Arts is awarded students who choose to major in Theology.

Candidates complete the two courses required of all students: Th 101: Revelation and Christology, 102: Christian Life Within the Church, and eight other courses. One course must be selected from each of these areas of Theology:

Scriptural Theology

Dogmatic or Systematic Theology

Pastoral or Practical Theology

Historical Theology

Interdepartment courses, particularly those which concern the psychology of religion and Theological themes in literature, have been approved.

The minimum requirements for the degree follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Foreign Language	10	—	Science	6	—
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	24
Mathematics	6	—	Electives	30	—
Philosophy	—	15			

A.B. (Theology)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
FL	5	FL	5
Hs 123—Europe to 1648.....	3	Hs 124—Europe Since 1648.....	3
Science Elective	3	Science Elective	3
Th 101—Christology	3	Pl 220—Phil. of Man.....	3
Total	14	Total	14

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Humanities Elective	3
Mt—Elective	3	Mt—Elective	3
Social Science Elective.....	3	Pl 230—Metaphysics	3
Th 102—Christian Life	3	Social Science Elective.....	3
Elective A	3	Elective B	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Humanities Elective	3	Humanities Elective	3
Pl 240—Prins. of Ethics.....	3	Pl—Program Elective	3
Th—Electives A, B.....	6	Th—Electives C, D.....	6
Elective C	3	Elective D	3
Total	15	Total	15

Senior Year

Pl—Program Elective	3	Th—Electives G, H.....	6
Th—Electives E, F	6	Electives H, I, J.....	9
Electives E, F, G.....	9		
Total	18	Total	15

THE BACHELOR OF SCIENCE (Natural Sciences)

(For Pre-Medical and Pre-Dental Students)

The curriculum for pre-medical and pre-dental students presents a liberal arts program with emphasis on those sciences required for an adequate background for subsequent studies in medicine, in dentistry, and in similar professions. Recurrent pronouncements by Committees on Admissions at professional schools leave no doubt that they regard an education in the liberal arts as one of the most important factors in forming a genuinely capable and effective professional man.

Pre-medical students are advised to plan a four-year course.

If a student wishes to major in another area, he is free to do so. He should then seek advice from a member of the Committee for Pre-Medical and Pre-Dental Studies so that his selected course of studies will assure him of a degree and qualify him for admission to schools of medicine or dentistry.

The University proposes the following program:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology	8	14	Philosophy	—	15
Chemistry	20	—	Physics	8	—
German	10	—	Psychology	3	—
History	6	—	Social Science	6	—
Humanities	12	—	Theology	6	6
Mathematics	6	—	Thesis	—	2

With the approval of a member of the Committee for Pre-Medical and Pre-Dental Studies, some of the scientific requirements in the program outlined above may be modified to suit the needs of individual students.

B.S. (Natural Sciences) (For Pre-Medical and Pre-Dental Students)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 110—Gen. Zoology I	2	Bl 112—Gen. Zoology II	2
Bl 111—Gen. Zoology I Lab	2	Bl 113—Gen. Zoology II Lab	2
Ch 110—Gen. Chemistry I	3	Ch 112—Gen. Chemistry II	3
Ch 111—Gen. Chemistry I Lab	1	Ch 113—Gen. Chemistry II Lab	2
Mt 101—Statistical Inference	3	Mt 121—Calculus (Scientific)	3
Pl 220—Phil. of Man	3	Th 101—Christology	3
Humanities Elective	3		
Total	17	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 120—Analytical, Physical	3	Bl 300—Vert. Embryology	2
Ch 121—Analytical, Physical Lab	1	Bl 301—Vert. Embryology Lab	2
Hs 123—Europe to 1648	3	Hs 124—Europe Since 1648	3
Ph 104—College Physics	3	Ph 106—College Physics	3
Ph 105—College Physics Lab	1	Ph 107—College Physics Lab	1
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Total	14	Total	14

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 310—Comp. Anat. Vertebrates	2	Bl 230—Genetics	2
Bl 311—Comp. Anat. Vertebrates	2	Bl 231—Genetics Lab	2
Lab	2	Ch 142—Organic Chemistry II	3
Ch 140—Organic Chemistry I	3	Ch 143—Organic Chemistry II Lab	1
Ch 141—Organic Chemistry I Lab	1	Ch 190—Chemical Lit.	1
ML	5	ML	5
Pl 240—Prins. of Ethics	3	Th—Elective	3
Humanities Elective	3		
Total	19	Total	17

Senior Year

Humanities Elective	3	Humanities Elective	3
Pl—Program Elective	3	Pl—Program Elective	3
Ps 101—Gen. Psychology	3	Social Science Elective	3
Social Science Elective	3	Th—Elective	3
Sc—Bl 360, Ch, or Ph	3/4	Sc—Bl 320, Ch, or Ph	3/4
Bl 398, Ch 398	1	Bl 399, Ch 399	1
Total	16-17	Total	16-17

PRE-DENTAL CURRICULUM

The Council on Dental Education of the American Dental Association prescribes as a minimum for admission to a recognized dental school the completion of at least two years of education in an accredited college of liberal arts. It should be emphasized that these are the minimum requirements. Prospective applicants are well advised to surpass minimum requirements. Many dental schools require a longer period of pre-professional education and either prescribe or recommend certain additional courses at liberal arts colleges before they consider students for acceptance.

The Committee for Pre-Dental Studies at Xavier University recommends as a minimum a program of three years of pre-dental studies. If at the end of his third year of college a pre-dental student wishes to extend his education to obtain a B.S. (Natural Sciences), the Committee has indicated the remaining required courses beyond the three-year program.

Students are advised to obtain information about the actual admission policies of the dental school they plan to attend, and to make sure that they meet the standards of admission in regard to both quality and quantity of courses.

Pre-Dental (Three-Year Program)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 110—Gen. Zoology I	2	Bl 112—Gen. Zoology II	2
Bl 111—Gen. Zoology I Lab	2	Bl 113—Gen. Zoology II Lab	2
Ch 110—Gen. Chemistry I	3	Ch 112—Gen. Chemistry II	3
Ch 111—Gen. Chemistry I Lab	1	Ch 113—Gen. Chemistry II Lab	2
Mt 101—Statistical Inference	3	Mt 121—Calculus (Scientific)	3
Pl 220—Phil. of Man	3	Th 101—Christology	3
Humanities Elective	3		
Total	17	Total	15

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Humanities Elective	3	Bl 300—Vert. Embryology	2
Hs 123—Europe to 1648	3	Bl 301—Vert. Embryology Lab	2
Ph 104—College Physics	3	Hs 124—Europe Since 1648	3
Ph 105—College Physics Lab	1	Ph 106—College Physics	3
Pl 230—Metaphysics	3	Ph 107—College Physics Lab	1
		Th 102—Christian Life	3
Total	13	Total	14

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Bl 310—Comp. Anat. Vertebrates	2	Humanities Elective	2
Bl 311—Comp. Anat. Vertebrates Lab	2	Ch 142—Organic Chemistry II	3
Ch 140—Organic Chemistry I	3	Ch 143—Organic Chemistry II Lab	1
Ch 141—Organic Chemistry I Lab	1	Pl—Program Elective	3
Pl 240—Prins. of Ethics	3	Th—Elective	3
Ps 101—Gen. Psychology	3	Ch 190—Chemical Lit.*	1
Humanities Elective	3		
Social Science Elective	3		
Total	20	Total	16-17

If the student plans to extend his education to obtain a B.S. (Natural Sciences), the following program is necessary:

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ch 120—Analytical, Physical	3	Bl 230—Genetics	2
Ch 121—Analytical, Physical Lab	1	Bl 231—Genetics Lab	2
ML	5	ML	5
Pl—Program Elective	3	Social Science Elective	3
Sc—Bl 360, Ch, or Ph	3/4	Sc—Bl 320, Ch, or Ph	3/4
Bl 398, Ch 398	1	Bl 399, Ch 399	1
		Th—Elective	3
Total	16-17	Total	19-20

* Required of those who plan to take Ch 399.

PRE-LEGAL STUDY

Though many law schools admit students after three years of undergraduate study, Ohio law schools and certain others require four years of college work. All students who intend to take the Ohio Bar Examination must have a college degree before beginning the study of law.

American law schools do not prescribe specific subjects for pre-law study, but a liberal arts course is highly recommended. Theology and philosophy, history, the social sciences and languages, mathematics, the natural sciences, and the arts—all are valuable for the future lawyer in developing a sound philosophy of life, intellectual maturity and discipline, and a well-rounded background.

Law schools place great emphasis on the basic ability to use the English language well in reading, in speaking, and especially in writing. One or two courses in accounting should be included in a pre-law program.

Students interested in a career in law should consult a member of the Xavier University Pre-Legal Committee. They are also urged to join the St. Thomas More Pre-Law Society.

THE BACHELOR OF SCIENCE IN BUSINESS

(Offered in General Business in the Evening College only)

This B.S.B.A. program for Evening College students requires the following non-business subjects:

<i>Subject</i>	<i>Sem. Hrs.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
English	3	Philosophy	15
Humanities	12	Social Sciences	12
Mathematics	6	Theology	12
Science	8		

Non-Catholics will substitute appropriate courses approved by the Dean for the Theology requirement.

The remainder of the curriculum is as follows:

Business Core:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Ac 100, 101	Principles of Accounting I-II.....	6
BA 270	Business Statistics	3
BA 280, 281	Business Law I-II.....	6
Ec 100, 101	Principles of Economics I-II.....	6
Ec 210	Human Resources	3
Ec 235	Economic History of the United States.....	3
Ec 250	Money and Banking.....	3
Ec 255	Business (Corporation Finance).....	3
Mg 100	Principles of Management	3
Mk 100	Principles of Marketing	3

Concentration

Ac 260	Financial Statements	3
Ec 320	Economic Theory and Social Order.....	3
Electives	At least one course from each of these fields:	
	Economics, Finance, Industrial-Relations/ Management, and Marketing	15

Degree Programs—
The College of Business Administration

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Accounting)

The program in accounting is designed to provide intensive training of a comprehensive nature for the adequate preparation of public, private or industrial accountants; auditors; credit analysts and general business executives. The advanced courses which elaborate on the theory and practice of accounts, business analysis, costs, auditing and specialized accounting culminate in preparation for C.P.A. examinations and for actual entrance into the field of public accountancy.

Students majoring in accounting must complete these specified courses:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Ac 100, 101	Principles of Accounting.....	6
Ac 200, 201	Intermediate Accounting.....	6
Ac 210	Advanced Accounting Problems.....	3
Ac 220, 221	Industrial Accounting.....	6
Ac	Electives.....	6
BA 270	Business Statistics.....	3
BA 280	Legal Environment.....	6
BA 396	Business Administration Problems.....	3
Ec 100, 101	Principles of Economics.....	6
Ec 250	Money and Banking.....	3
Ec 210	Human Resources.....	3
Mg 100	Principles of Management.....	3
Mk 100	Principles of Marketing.....	3
Total.....		57

The required curriculum for the degree follows:

<i>Subject</i>	<i>Sem. Hrs.</i>		<i>Subject</i>	<i>Sem. Hrs.</i>	
	<i>L.D.</i>	<i>U.D.</i>		<i>L.D.</i>	<i>U.D.</i>
Accounting.....	6	21	Marketing.....	3	—
Business Administration.....	—	9	Mathematics.....	6	—
Economics.....	6	3	Philosophy.....	—	15
Finance.....	—	3	Science.....	6	—
Humanities.....	12	—	Social Science.....	6	—
Management and			Theology.....	6	6
Indus. Rel.	3	3	Electives.....	6	—

B.S.B.A. (Accounting)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 100—Prins. of Accounting.....	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics.....	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math. (Business).....	3	Mt 122—Calculus (Business).....	3
Pl 220—Phil. of Man.....	3	Th 101—Christology.....	3
Humanities Elective.....	3	Humanities Elective.....	3
Total.....	15	Total.....	15

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 200—Interm. Accounting.....	3	Ac 201—Interm. Accounting.....	3
BA 280—Legal Environment.....	3	BA 270—Business Statistics.....	3
Mk 100—Prins. of Marketing.....	3	Mg 100—Prins. of Management.....	3
Pl 230—Metaphysics.....	3	Th 102—Christian Life.....	3
Humanities Elective.....	3	Humanities Elective.....	3
Total.....	15	Total.....	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 220—Managerial Cost Accounting.....	3	Ac 221—Managerial Cost Accounting.....	3
Ac—Elective.....	3	Fi 255—Business Finance.....	3
Pl 240—Prins. of Ethics.....	3	Th—Elective.....	3
Science Elective.....	3	Science Elective.....	3
Social Science Elective.....	3	Social Science Elective.....	3
Total.....	15	Total.....	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 210—Adv. Accounting Probs.....	3	BA 396—Bus. Admin. Probs.....	3
Ac—Elective.....	3	Ec 250—Money and Banking.....	3
Ec 210—Human Resources.....	3	Pl—Program Elective.....	3
Pl—Program Elective.....	3	Th—Elective.....	3
Elective A.....	3	Elective B.....	3
Total.....	15	Total.....	15

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Economics)

This Bachelor of Science in Business Administration provides the student with principles and procedures fundamental to the intellectual analysis of economic problems of the individual firm, industry, and the economy as a whole. Such training prepares the student to recognize the problem, to analyze it objectively, and to offer a proper solution. The program is beneficial to those who wish to assume positions as economists, either private or public; business analysts; investment analysts; business executives; and labor leaders. It encourages them not only to solve individual problems, but to analyze the monetary and fiscal policy of the government in relation to its effects on the total economy.

Students working for the B.S.B.A. (Economics) must complete these specified courses:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Ec 100, 101	Principles of Economics	6
Ec 200	Microeconomic Analysis	3
Ec 201	Macroeconomic Analysis	3
Ec 202	History of Economic Thought	3
Ec 210	Human Resources	3
Ec 345	International Trade	3
Ec	Electives	9
Ac 100, 101	Principles of Accounting	6
Mk 100	Principles of Marketing	3
Mg 100	Principles of Management	3
Fi 250	Money and Banking	3
Fi 255	Business Finance	3
BA 270	Business Statistics	3
BA 280	Legal Environment	3
BA 396	Business Administration Problems	3
Total		57

Prescribed subjects and credit hours required for the B.S.B.A. (Economics) follow:

<i>Sem. Hrs.</i>		<i>Sem. Hrs.</i>	
<i>Subject</i>	<i>L.D. U.D.</i>	<i>Subject</i>	<i>L.D. U.D.</i>
Accounting	6 —	Mathematics	6 —
Business Adm.	— 9	Philosophy	— 15
Economics	6 21	Science	6 —
Humanities	12 —	Social Science	6 —
Finance	— 6	Theology	6 6
Management and I.R.	3 3	Electives	6 —
Marketing	3 —		

B.S.B.A. (Economics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 100—Prins. of Accounting.....	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math (Business) 3		Mt 122—Calculus (Business)	3
Pl 220—Phil. of Man	3	Th 101—Christology	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
BA 280—Legal Environment	3	BA 270—Business Statistics	3
Ec 210—Human Resources	3	Fi 255—Business Finance	3
Mg 100—Prins. of Management.....	3	Mk 100—Prins. of Marketing.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ec 200—Microeconomic Analysis 3		Ec 201—Macroeconomic Analysis 3	
Ec 250—Money and Banking.....	3	Ec 202—Hist. Econ. Thought.....	3
Pl 240—Prins. of Ethics.....	3	Th—Elective	3
Science Elective	3	Science Elective	3
Social Science Elective.....	3	Social Science Elective.....	3
Total	15	Total	15

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ec 345—International Trade	3	BA 396—Bus. Admin. Probs.....	3
Ec—Electives	6	Ec—Elective	3
Pl—Program Elective	3	Pl—Program Elective	3
Elective A	3	Th—Elective	3
		Elective B	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Finance)

The Bachelor of Science in Business Administration program in finance develops an appreciation in the student of financial management and financial operation. Every one majoring in finance must take three basic courses designed to acquaint him with the various financial records of the firm, the character and appraisal of corporate securities, and the financial techniques applicable to the various phases of this discipline. In addition, the student may choose elective subjects. This permits him to aim at a particular segment of finance such as corporate finance, security sales, etc. Certain courses are offered each semester. Others are cycled every other semester of every other year to provide the greatest diversification possible. Majors in finance will be offered opportunities to inspect various financial institutions and to meet with professionals in the field.

Students working for the B.S.B.A. (Finance) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Fi 250	Money and Banking	3
Fi 255	Business Finance	3
Fi 265	Investments	3
Fi 380	Cases and Problems in Finance.....	3
Fi 390	Seminar in Finance.....	3
Fi	Electives	9
Ac 100, 101	Principles of Accounting	6
Ec 100, 101	Principles of Economics	6
Mk 100	Principles of Marketing	3
Mg 100	Principles of Management	3
IR 210	Human Resources	3
BA 270	Business Statistics	3
BA 280	Legal Environment	3
BA 396	Business Administration Problems	3
Total		54

Prescribed subjects and credit hours required for the B.S.B.A. (Finance) follow:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Accounting	6 —	Marketing	3 —
Business Adm.	— 9	Mathematics	6 —
Economics	6 —	Philosophy	— 15
Humanities	12 —	Science	6 —
Finance	— 24	Theology	6 6
Social Science	6 —	Electives	9 —
Management and I.R.....	3 3		

B.S.B.A. (Finance)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 100—Prins. of Accounting.....	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics.....	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math. (Business) 3		Mt 122—Calculus (Business)	3
Pl 220—Phil. of Man.....	3	Th 101—Christology	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
BA 270—Business Statistics	3	BA 280—Legal Environment	3
Fi 255—Business Finance	3	Ec 210—Human Resources	3
Mk 100—Prins. of Marketing	3	Mg 100—Prins. of Management.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Fi 250—Money and Banking.....	3	Fi—Elective	3
Fi 265—Investment	3	Th—Elective	3
Pl 240—Prins. of Ethics.....	3	Science Elective	3
Science Elective	3	Social Science Elective.....	3
Social Science Elective.....	3	Elective A	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Fi 380—Cases and Probs.....	3	BA 396—Bus. Admin. Probs.....	3
Fi—Elective	3	Fi 390—Seminar in Finance.....	3
Pl—Program Elective	3	Fi—Elective	3
Electives B, C.....	6	Pl—Program Elective	3
		Th—Elective	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Industrial Relations)

In an industrial society which is becoming increasingly more complex and inter-dependent, the need for leaders in the area of industrial relations with a well-rounded professional training is a necessity. This program is designed to provide specific knowledge of labor and is supported by strong cultural background in the liberal arts. Concentration in industrial relations will acquaint the student with the economic, social, political, and psychological aspects of labor problems and relations. It, also, prepares him for further academic study and for positions in government, industry, or the labor movement.

Students working for the B.S.B.A. (Industrial Relations) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mg 100	Principles of Management.....	3
IR 210	Human Resources	3
IR 300	Labor Relations	3
IR 320	Personnel Administration	3
IR 330	Industrial Psychology	3
IR	Electives	9
Ac 100, 101	Principles of Accounting	6
Mk 100	Principles of Marketing	3
Ec 100, 101	Principles of Economics	6
Fi 250	Money and Banking	3
Fi 255	Business Finance	3
BA 270	Business Statistics	3
BA 280	Legal Environment	3
BA 396	Business Administration Problems	3
Total		54

Prescribed subjects and credit hours required for the B.S.B.A. (Industrial Relations) follow:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Accounting	6 —	Mathematics	6 —
Business Admin.	— 9	Philosophy	— 15
Economics	6 3	Science	6 —
Finance	— 6	Social Science	6 —
Humanities	12 —	Theology	6 6
Management and I.R.	3 21	Electives	9 —
Marketing	3 —		

B.S.B.A. (Industrial Relations)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 100—Prins. of Accounting.....	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math. (Business) ..	3	Mt 122—Calculus (Business)	3
Pl 220—Phil. of Man	3	Th 101—Christology	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
BA 280—Legal Environment	3	BA 270—Business Statistics	3
IR 210—Human Resources	3	Fi 255—Business Finance	3
Mg 100—Prins. of Management.....	3	Mk 100—Prins. of Marketing.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
IR 320—Personnel Admin.	3	IR 300—Labor Relations	3
Pl 240—Prins. of Ethics	3	IR—Elective	3
Science Elective	3	TH—Elective	3
Social Science Elective.....	3	Science Elective	3
Elective A	3	Social Science Elective.....	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
IR 330—Indust. Psychology	3	BA 396—Bus. Admin. Probs.....	3
IR—Elective	3	Ec 250—Money and Banking.....	3
Pl—Program Elective	3	IR—Elective	3
Electives B, C	6	Pl—Program Elective	3
		Th—Elective	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Management)

Contributions of the business world to society are largely dependent on good management.

The objectives of this program are to facilitate such contributions by:

1. Providing specialized professional training in the principles and the practices for the effective operation of the business organization.
2. Stimulating the application of sound philosophical principles to the wide range of problems encountered by management.
3. Aiding in the development of the student's intellect and personality to prepare him for leadership in society.

Students working for the B.S.B.A. (Management) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mg 100	Principles of Management.....	3
Mg 300	Labor Relations	3
Mg 320	Personnel Administration	3
Mg	Electives	12
Ac 100, 101	Principles of Accounting.....	6
Ec 100, 101	Principles of Economics.....	6
Mk 100	Principles of Marketing.....	3
IR 210	Human Resources	3
Fi 250	Money and Banking	3
Fi 255	Business Finance	3
BA 270	Business Statistics	3
BA 280	Legal Environment	3
BA 396	Business Administration Problems.....	3
Total		54

Prescribed subjects and credit hours required for the B.S.B.A. (Management) follow:

Sem. Hrs.		Subject		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.		
Accounting	6 —	Mathematics	6 —		
Business Admin.	— 9	Philosophy	— 15		
Economics	6 3	Science	6 —		
Finance	— 6	Social Science	6 —		
Humanities	12 —	Theology	6 6		
Management and I.R.	3 21	Electives	9 —		
Marketing	3 —				

B.S.B.A. (Management)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 100—Prins. of Accounting	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math. (Business)	3	Mt 122—Calculus (Business)	3
Pl 220—Phil. of Man.....	3	Th 101—Christology	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
BA 280—Legal Environment	3	BA 270—Business Statistics	3
IR 210—Human Resources	3	Fi 255—Business Finance	3
Mg 100—Prins. of Management.....	3	Mk 100—Prins. of Marketing.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg 320—Personnel Admin.	3	Mg 300—Labor Relations	3
Pl 240—Prins. of Ethics.....	3	Mg—Elective	3
Science Elective	3	Th—Elective	3
Social Science Elective.....	3	Science Elective	3
Elective A	3	Social Science Elective.....	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg—Electives	6	BA 396—Bus. Admin. Probs.....	3
Pl—Program Elective	3	Ec 250—Money and Banking.....	3
Electives B, C.....	6	Mg—Elective	3
		Pl—Program Elective	3
		Th—Elective	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Marketing)

The Bachelor of Science in Business Administration program with a concentration in marketing studies the institutions and functions of the modern distribution system. The program orients the student towards the total marketing concept so that, trained in the analytical processes, he is qualified for management responsibility in the marketing area. Furthermore, a student will find the study of marketing complementary to his choice of a career in the field.

Students working for the B.S.B.A. (Marketing) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mk 100	Principles of Marketing.....	3
Mk 201	Marketing Policy	3
Mk 202	Marketing Research	3
Mk 204	Marketing Management	3
Mk	Electives	9
Ac 100, 101	Principles of Accounting	6
Ec 100, 101	Principles of Economics	6
Mg 100	Principles of Management.....	3
IR 210	Human Resources	3
Fi 250	Money and Banking.....	3
Fi 255	Business Finance	3
BA 270	Business Statistics	3
BA 280	Legal Environment	3
BA 396	Business Administration Problems.....	3
Total		54

Prescribed subjects and credit hours required for the B.S.B.A. (Marketing) follow:

Subject		Sem. Hrs.		Subject		Sem. Hrs.	
		L.D.	U.D.			L.D.	U.D.
Accounting		6	—	Mathematics		6	—
Business Administration		—	9	Philosophy		—	15
Economics		6	3	Science		6	—
Finance		—	6	Social Science		6	—
Humanities		12	—	Theology		6	6
Management and I.R.....		3	3	Electives		9	—
Marketing		3	18				

B.S.B.A. (Marketing)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 100—Prins. of Accounting.....	3	Ac 101—Prins. of Accounting.....	3
Ec 100—Prins. of Economics.....	3	Ec 101—Prins. of Economics.....	3
Mt 112—College Math. (Business) 3		Mt 122—Calculus (Business)	3
Pl 220—Phil. of Man.....	3	Th 101—Christology	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
BA 280—Legal Environment	3	BA 270—Business Statistics	3
IR 210—Human Resources	3	Fi 255—Business Finance	3
Mg 100—Prins. of Management.....	3	Mk 100—Prins. of Marketing.....	3
Pl 230—Metaphysics	3	Th 102—Christian Life	3
Humanities Elective	3	Humanities Elective	3
Total	15	Total	15

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 201—Marketing Policy	3	Mk 202—Marketing Research	3
Pl 240—Prins. of Ethics.....	3	Mk—Elective	3
Science Elective	3	Science Elective	3
Social Science Elective.....	3	Social Science Elective.....	3
Elective A	3	Th—Elective	3
Total	15	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 250—Money and Banking.....	3	BA 396—Bus. Admin. Probs.....	3
Mk—Electives	6	Mk 204—Marketing Management	3
Pl—Program Elective	3	Pl—Program Elective	3
Elective B	3	Th—Elective	3
Total	15	Elective C	3
		Total	15

Departments— The College of Arts and Sciences

Biology (BI)

Staff: DR. CUSICK, *chairman*; DR. HIGGINS, MR. HEDEEN, FR. PETERS, MR. PETRI, DR. TAFURI

Laboratory Instructors: MRS. CUSICK, MR. LAYCOCK, MR. MUNCH

BI 102 and 104 *may not be taken for biology major, pre-medical, or pre-dental requirements.*

BI 110 and 112 are required as introduction to all 200 level courses. In exceptional cases, BI 102 and 104 may be considered as partial fulfillment.

Lower Division Courses

- 102 **GENERAL BIOLOGY I.** Two credit hours. An introduction to the fundamental principles of life from cellular to higher organismal levels with special reference to the biology of man. A terminal course for non-science majors.
- 103 **GENERAL BIOLOGY I LABORATORY.** One credit hour. A study of structure and function of cells and tissues with a dissection of the fetal pig to illustrate vertebrate organization.
- 104 **GENERAL BIOLOGY II.** Two credit hours. A continuation of BI 102. A survey of the morphology, physiology, and life history of representative plants and invertebrate animals together with discussions of modern concepts in heredity, development, evolution, and environmental biology. Prerequisites: BI 102 and 103.
- 105 **GENERAL BIOLOGY II LABORATORY.** One credit hour. A study of living and preserved invertebrate representatives as well as plant forms including bacteria, fungi, and higher plants. Exercises designed to illuminate principles of genetics, embryology, evolution, and ecology.
- 106 **HUMAN ANATOMY AND PHYSIOLOGY I.** Two credit hours. A study of the cells, tissues, organs, and systems of man with emphasis on the skeletal, muscular, and nervous systems and the physiology of exercise. For students majoring in physical education.
- 107 **HUMAN ANATOMY AND PHYSIOLOGY I LABORATORY.** One credit hour. Exercises and demonstrations to illustrate concepts discussed in the lectures. Study of the human skeleton with dissection of the neuro-muscular systems and internal anatomy of the cat.
- 108 **HUMAN ANATOMY AND PHYSIOLOGY II.** Two credit hours. A continuation of BI 106. The respiratory, circulatory, digestive, excretory, and endocrine systems. Prerequisites: BI 106 and 107.
- 109 **HUMAN ANATOMY AND PHYSIOLOGY II LABORATORY.** One credit hour. Examination of the microscopic anatomy of tissues and organs with some physiological studies of muscle, nerve, respiration, digestion, and circulation.

- 110 **GENERAL ZOOLOGY I.** Two credit hours. The basic principles of biology, classical and molecular, emphasizing the chordates and particularly the anatomy, physiology, development, and behavior of several representative vertebrates. Required as an introduction to most 200 level courses.
- 111 **GENERAL ZOOLOGY I LABORATORY.** Two credit hours. Dissection of the frog and microscopic study of vertebrate tissues with observations of physiological phenomena characteristic of cells, tissues, organs, and vertebrate behavior.
- 112 **GENERAL ZOOLOGY II.** Two credit hours. A continuation of B1 110. A systematic survey of the invertebrate phyla: their morphology, physiology, classification, life histories, development, and behavior. Current topics in heredity, evolution, ecology, and related areas.
- 113 **GENERAL ZOOLOGY II LABORATORY.** Lecture. Two credit hours. Representatives from each major phylum are studied using preserved specimens and slides with extensive use of living organisms including terrestrial, fresh water and marine forms. Genetic materials, fossils and invertebrate behavior patterns are examined.
- 120 **GENERAL BOTANY.** Two credit hours. The morphology, physiology, reproduction, and classification of representatives of the major divisions of the plant kingdom. Seed plants are stressed.
- 121 **GENERAL BOTANY LABORATORY.** Two credit hours. Living and preserved specimens of representatives of the various plant groups. Demonstration of pertinent principles of plant physiology.

Upper Division Courses

- 200 **ADVANCED BOTANY.** Two credit hours. A study of representatives of the various plant divisions stressing the physiology and reproduction of these organisms. The effects of plants on the activities of man.
- 201 **ADVANCED BOTANY LABORATORY.** Two credit hours. An examination of plants in the field and laboratory. Experiments demonstrating aspects of plant physiology will be included together with methods of collecting, preserving, and identifying plants.
- 210 **GENERAL MICROBIOLOGY.** Two credit hours. The physiology and morphology of the algae, bacteria, and fungi. The beneficial and detrimental effects of these organisms.
- 211 **GENERAL MICROBIOLOGY LABORATORY.** Two credit hours. Methods of isolation and culture of the algae, bacteria, and fungi. Techniques of classification of these organisms.
- 230 **GENETICS.** Two credit hours. Principles of heredity and the operations of genetic factors in the development of individual traits. Prerequisite: B1 102, 104 or B1 110-112.
- 231 **GENETICS LABORATORY.** Two credit hours. Techniques of investigating fundamental genetic principles. The fruit fly as an experimental animal with studies of bacterial genetics.

- 240 **EVOLUTION.** Two credit hours. Evidence for and the mechanisms of evolutionary processes. Prerequisite: B1 102, 104 or B1 110, 112.
- 246 **HISTORY OF BIOLOGY.** Two credit hours. The historical development of the biological sciences. Prerequisite: B1 102, 104 or B1 110, 112.
- 250 **GENERAL ECOLOGY.** Two credit hours. The relationships between organisms and their living and non-living environments. Prerequisite: B1 110, 112. B1 200 recommended.
- 251 **GENERAL ECOLOGY LABORATORY.** Two credit hours. Laboratory and field exercises to illustrate ecological principles. Local aquatic and terrestrial habitats are investigated and their biotic elements identified. Concurrently with B1 250.
- 260 **INVERTEBRATE ZOOLOGY.** Two credit hours. Characteristics, life cycles, habits, economic importance, and evolution of invertebrate animals. Prerequisite: B1 110, 112.
- 261 **INVERTEBRATE ZOOLOGY LABORATORY.** Two credit hours. Systematic study of the invertebrate phyla using fixed preparations: preserved specimens, and living forms.
- 266 **GENERAL ENTOMOLOGY.** Two credit hours. Structure, life histories, habits, habitats of insects. Prerequisite: B1 110, 112 including lab.
- 267 **GENERAL ENTOMOLOGY LABORATORY.** Two credit hours. The morphology and classification of the major orders of insects including some field experience in various collecting methods.
- 290 **SPECIAL PROBLEMS IN BIOLOGY.** One to four credit hours. A program designed to give the student an opportunity to engage in independent study in some specialized area of biology. Prerequisite B1 110, 112 and permission of the Chairman. A charge will be made for materials used in the laboratory.
- 300 **GENERAL AND VERTEBRATE EMBRYOLOGY.** Two credit hours. The morphological and physiological aspects of vertebrate development. Prerequisite: B1 110, 112.
- 301 **GENERAL VERTEBRATE EMBRYOLOGY LABORATORY.** Two credit hours. A study of gametogenesis, fertilization, cleavage, and gastrulation, with some emphasis on organogenesis of the chick and pig. Experiments with living materials illustrate principles of development.
- 310 **COMPARATIVE ANATOMY OF THE VERTEBRATES.** Two credit hours. A study of morphology and morphogenesis of the vertebrates. The structure that characterizes vertebrate taxa, the relationship among the various structure patterns, phyletic lines, and evolutionary change. Prerequisite: B1 110, 112, B1 300.
- 311 **COMPARATIVE ANATOMY OF THE VERTEBRATES LABORATORY.** Two credit hours. Critical observation and analysis of structure and function in relation to principal adaptations, and to the development of dissecting skills.

- 320 **VERTEBRATE GENERAL HISTOLOGY.** Two credit hours. A study of tissue structure and function. Cells, intercellular substances, and the four primary tissues. Tissue specializations, relationship of structure to function, and adaptations of tissue for specific organ-purposes. Prerequisite: B1 110, 112, senior standing, or permission of instructor.
- 321 **VERTEBRATE GENERAL HISTOLOGY LABORATORY.** Two credit hours. A microscopic study of fixed materials employing routine and histochemical techniques to demonstrate cell, tissue, and organ morphology.
- 340 **BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Two credit hours. The functions of receptors, nervous system, and effectors involved in the responses of animals to environmental changes, with emphasis on data and generalizations derived from experiments using modern chemical and electrical techniques. Prerequisite: B1 110, 112.
- 341 **BIOLOGICAL BASIS OF BEHAVIOR LABORATORY.** Two credit hours. An examination of the gross and microscopic structure of adult and developing vertebrates, with emphasis on the nervous system. Secondly, electronic instruments used to modify the environment and record the responses of organisms. Prerequisite: B1 110, 112, senior standing, or permission of instructor.
- 360 **GENERAL VERTEBRATE PHYSIOLOGY.** Two credit hours. A study of function on the molecular, cellular, and organ systems level in vertebrates including contraction, perception, digestion, metabolism, circulation, respiration, and coordination.
- 361 **GENERAL VERTEBRATE PHYSIOLOGY LABORATORY.** Two credit hours. Exercises requiring careful preparation of living materials and observation of their functional responses using modern physiological instrumentation.
- 370 **BIOCHEMISTRY.** Three credit hours. (Ch 370)
- 398 **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. Research in one of the fields of biology with emphasis on the gathering of experimental data from living organisms and their interpretation. Prerequisite: senior standing and approval of the Chairman. A charge of \$25 for materials used will be payable only once for both B1 398 and B1 399.
- 399 **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. A continuation of B1 398 emphasizing experimental design and controls together with the written and oral presentation of scientific reports.

Chemistry (Ch)

Staff: DR. JOHNSON, *chairman*; DR. DUBE, DR. GARASCIA, DR. KLINGENBERG, DR. O'NEILL, DR. SMART, FR. THEPE.
Assisted by: DR. BIGGART, MR. HAUSER, DR. MESSINEO.
Graduate Assistants: MR. DOLZINE, MR. EVANS, MR. FURTAK, MR. GRANT, MR. MILLER, MR. POECHMAN, MR. QAS-ELIAS, MISS SMALL, MR. SOTERA.
Laboratory Instructors: MR. ENGEL, MR. HOGAN, MR. WAHL.

Lower Division Courses

- 102 **FOUNDATIONS OF CHEMISTRY I.** Two credit hours. A terminal course for non-science majors which introduces the student to the structure of matter. Subjects covered include kinetic molecular theory, atomic and molecular structure, and nuclear processes.
- 103 **FOUNDATIONS OF CHEMISTRY I LABORATORY.** One credit hour. Chemical experimentation designed to illustrate principles discussed in Ch 102. One two-hour period a week.
- 104 **FOUNDATIONS OF CHEMISTRY II.** Two credit hours. The continuation of Ch 102. Stress is placed on the chemical aspects of materials in common use today.
- 105 **FOUNDATIONS OF CHEMISTRY II LABORATORY.** One credit hour. A continuation of Ch 103 laboratory. One two-hour period per week.
- 110 **GENERAL CHEMISTRY I.** Three credit hours. Lectures and demonstrations combined with discussion of problems. An examination of the basic principles and descriptive facts of general chemistry. Included are treatments of atomic and molecular structure, states of matter, solutions, equilibrium and kinetics. A pre-professional course. Prerequisite to all other courses except Ch 102-105 inclusive.
- 111 **GENERAL CHEMISTRY I LABORATORY.** One credit hour. Practice in the basic operations of chemical laboratory work. Experiments illustrate topics and principles covered in Ch 110. One three-hour period per week.
- 112 **GENERAL CHEMISTRY II.** Three credit hours. A continuation of Ch 110. Subjects include aqueous equilibrium, thermodynamics, electrochemistry, and the chemistry of representative elements. Prerequisite: Ch 110.
- 113 **GENERAL CHEMISTRY II LABORATORY.** One or two credit hours. A continuation of Ch 111. The laboratory work includes some qualitative and quantitative inorganic analysis and some radiochemical experiments. One or two three-hour periods per week. Prerequisite: Ch 111.
- 120 **ANALYTICAL AND PHYSICAL CHEMISTRY.** Three credit hours. A course for pre-medical, pre-dental and education (those intending to teach chemistry) students. Lectures develop principles of physical chemistry and analytical chemistry, especially insofar as they relate to the health sciences. Prerequisite: Ch 112.
- 121 **ANALYTICAL AND PHYSICAL CHEMISTRY LABORATORY.** Practice in analytical techniques and instrumental methods of analysis. Four hours per week. Prerequisite: Ch 113.
- 130 **PHYSICAL CHEMISTRY I.** Three credit hours. An introduction to theoretical chemistry with emphasis on thermodynamics and chemical equilibrium. Prerequisites: Ch 112, Mt 120, and Ph 108, the last being taken at least concurrently.
- 131 **PHYSICAL CHEMISTRY I LABORATORY.** One credit hour. A course to accompany Ch 130 and to illustrate by means of selected experiments principles discussed in Ch 130. Prerequisite: Ch 113.

Chemistry

- 132 **PHYSICAL CHEMISTRY II.** Three credit hours. A continuation of Ch 130. Chief emphasis is on chemical kinetics and the states of matter. Prerequisite: Ch 130.
- 133 **PHYSICAL CHEMISTRY II LABORATORY.** One credit hour. A course to accompany Ch 132 and to illustrate, by selected experiments, principles discussed in Ch 132. Prerequisite: Ch 131.
- 140 **ORGANIC CHEMISTRY I.** Three credit hours. An introductory course treating of the structure, preparation, reactions, and properties of organic compounds. Prerequisite: Ch 112.
- 141 **ORGANIC CHEMISTRY I LABORATORY.** One credit hour. The practice of fundamental operations involved in the synthesis, separation, purification, and identification of organic compounds. One four-hour laboratory period per week. Prerequisite: Ch 113.
- 142 **ORGANIC CHEMISTRY II.** Three credit hours. A continuation of Ch 140 which extends the treatment of fundamental organic chemistry. Some special topics are included. Prerequisite: Ch 140.
- 143 **ORGANIC CHEMISTRY II LABORATORY.** One credit hour. A continuation of the laboratory work of Ch 141 with increased emphasis on the reactions and synthesis of organic systems. Prerequisite: Ch 141.
- 190 **CHEMICAL LITERATURE.** One credit hour. An introduction to the nature and use of the chemical literature, general research procedures, and technical report writing. Prerequisite: junior standing.

Upper Division Courses

- 230 **PHYSICAL CHEMISTRY III.** Two credit hours. An introduction to quantum chemistry, kinetic theory, and molecular structure. Prerequisite: Ch 132.
- 245 **ORGANIC PREPARATIONS.** One or two credit hours. Lecture or consultation and laboratory work dealing with the fundamental techniques and manipulations of organic synthesis. Both theory and practice of operations, such as distillation, melting point determination, recrystallization, etc., are reviewed. One lecture or individual consultation and three hours of laboratory work per week per credit hour. Prerequisite: Ch 143.
- 250 **QUALITATIVE ORGANIC ANALYSIS.** Three credit hours. The systematic identification of pure organic compounds and of mixtures. Instrumental methods of structure determination are included. One or two lectures and four to six hours of laboratory work per week. Prerequisites: Ch 142, 143.
- 260 **INORGANIC CHEMISTRY.** Three credit hours. A presentation of modern theories of bonding and structure, as applied to inorganic compounds, with associated descriptive chemistry. Prerequisite: Ch 230.
- 261 **INORGANIC CHEMISTRY LABORATORY.** One credit hour. Laboratory techniques and practice in synthetic inorganic chemistry. One laboratory period per week. Corequisite: Ch 260.

- 265 **INORGANIC PREPARATIONS.** One lecture or individual consultation, and three hours of laboratory work per credit hour. Laboratory preparation of various classes of compounds intended to develop technique and to illustrate the methods employed in the preparation of pure inorganic compounds.
- 280 **INSTRUMENTAL ANALYSIS.** Two or three credit hours. Discussion of modern analytical chemistry with emphasis on instrumentation and measurement techniques. Prerequisite: Ch 132.
- 281 **INSTRUMENTAL ANALYSIS LABORATORY.** Two credit hours. Practice in the use of chemical instrumentation as available. Instruments and measurements illustrate topics discussed in the corresponding lecture course. Two three-hour periods per week. Prerequisites: Ch 133, 280.
- 290 **PROBLEMS IN PHYSICAL CHEMISTRY.** Credit by arrangement. Conferences and direction in library and/or laboratory work in some area of physical chemistry. A charge will be made for materials used. Prerequisite: permission of the Chairman of the Department.
- 291 **PROBLEMS IN ORGANIC CHEMISTRY.** Description as for Ch 290, but work done is in some area of organic chemistry.
- 292 **PROBLEMS IN INORGANIC CHEMISTRY.** Description as for Ch 290, but work done is in some area of inorganic chemistry.
- 293 **PROBLEMS IN BIOCHEMISTRY.** Description as for Ch 290, but work done is in some area of biochemistry.
- 294 **PROBLEMS IN ANALYTICAL CHEMISTRY.** Description as for Ch 290, but work done is in some area of analytical chemistry.
- 298 **SENIOR RESEARCH I.** One credit hour. Directed reading and undergraduate laboratory research required of all chemistry majors in their senior year. A charge will be made for materials used.
- 299 **SENIOR RESEARCH II.** One credit hour. A continuation and conclusion of research begun in Ch 298. No additional charge for materials will be made. A written thesis is required as a final report of the activities of Ch 298 and 299.
- 320 **INTRODUCTION TO RADIOCHEMISTRY.** Two credit hours. Lecture and laboratory totaling four hours per week. Basic principles of radiochemistry and the methodology of instrumental techniques in the field.
- 340 **TOPICS IN ORGANIC CHEMISTRY.** Two credit hours. An extension of fundamental organic chemistry to include more specialized topics not previously considered or extensively treated. Prerequisite: Ch 142.
- 370 **BIOCHEMISTRY.** Three credit hours. A lecture course treating of the chemistry and biochemistry of carbohydrates, lipids, and proteins. Special topics, such as enzymes, biochemical energetics, photosynthesis, and hormones, are included as time permits. Prerequisite: Ch 142.

Graduate Courses

- 500 **GRADUATE CHEMISTRY SEMINAR.** No credit. Critical discussion of, and progress reports on, theses and special topics by graduate students and staff members. Required each semester for all full-time graduate students. Prerequisite: graduate standing.
- 502 **ORGANIC CHEMISTRY FOR TEACHERS.** Lecture. Four credit hours. A course covering the structure, synthesis, properties, and reactions of carbon compounds—aliphatic, aromatic, and alicyclic.
- 503 **ORGANIC CHEMISTRY FOR TEACHERS LABORATORY.** Two credit hours. Laboratory practice in the techniques of preparation, separation, purification, and identification of organic compounds.
- 504 **THEORETICAL CHEMISTRY FOR TEACHERS.** Four credit hours. A course intended to present the basic principles of physical and analytical chemistry.
- 505 **THEORETICAL CHEMISTRY FOR TEACHERS LABORATORY.** Two credit hours. Experiments illustrate principles of both analytical and physical chemistry. Some instrumental methods of measurement are included.
- 506 **INORGANIC CHEMISTRY FOR TEACHERS.** Four credit hours. Lectures only. This course will normally accompany Ch 510. Modern structural inorganic chemistry as well as descriptive chemistry based on the periodic relationships will be covered.
- 510 **CHEMICAL RESEARCH FOR TEACHERS.** Two credit hours. Laboratory work, library work, and written and oral report. After instruction in the use of chemical literature, the student selects a research topic upon which he will begin work during the same summer. Upon completion of the project, he submits a written report. An oral examination will be given over this material to satisfy the final examination requirement for the concentration in chemistry.
- 520 **RADIOCHEMISTRY.** Two credit hours. Principles of radiochemistry, properties of nuclides, advanced instrumental techniques, and methodology of radiochemical applications. Prerequisite: Ch 320 or its equivalent.
- 521 **RADIOCHEMISTRY LABORATORY.** One or two credit hours. Laboratory and instrumental technique in radiochemistry. Prerequisite: Ch 320. Corequisite: Ch 520.
- 525 **THERMODYNAMICS.** Two credit hours. Classical and statistical thermodynamics and in the kinetic theory of gases.
- 530 **CHEMICAL KINETICS.** Two credit hours. Empirical and theoretical treatment of homogenous reactions. Subjects covered include collision and transition state theories, experimental methods, and the differential and integrated rate expressions for a variety of mechanisms.
- 535 **THE CHEMICAL BOND.** Two credit hours. An introduction to the quantum theory of valence emphasizing calculations on molecular structure.
- 538 **INTRODUCTION TO VIBRATIONAL SPECTROSCOPY.** Two credit hours. The theory of vibrational-rotational molecular spectroscopy.
- 550 **ORGANIC STEREOCHEMISTRY.** Two credit hours. Fundamental structural theory and symmetry operations applied to the three-dimensional static and dynamic aspects of organic compounds. Geometrical, optical, and conformational isomerism. The stereochemical factors in certain organic reactions. Stereochemistry of elements other than carbon.
- 555 **HETEROCYCLIC ORGANIC CHEMISTRY.** Two credit hours. The application of fundamental organic reactions as applied to the heterocyclic organic molecules. Two lectures per week.
- 580 **ADVANCED ORGANIC PREPARATIONS.** One to three credit hours. Lectures and/or consultation, and three hours of laboratory work per week per credit hour. A laboratory course.
- 590 **REACTION MECHANISMS.** Three credit hours. Theories of reaction mechanisms and their applications to both organic and inorganic systems. Reaction mechanisms specific to certain types of compounds. Methods for determination of mechanisms. Prerequisite: Ch 530.
- 595 **ORGANOMETALLIC CHEMISTRY.** Two credit hours. Organometallic compounds and their chemistry. Synthesis, isolation, bonding, structure, and reactions are covered. Chief emphasis is on compounds containing sigma carbon-metal bonds.
- 610 **STRUCTURAL INORGANIC CHEMISTRY.** Two credit hours. Principles which determine the structure of inorganic substances. Emphasis is placed on periodic properties and bonding theories with special attention given to coordination chemistry. Prerequisite: Ch 535.
- 630 **ADVANCED BIOCHEMISTRY.** Two credit hours. A review and extension of fundamental biochemistry. Lectures supplemented by library assignments. Prerequisite: Ch 370 or its equivalent.
- 640 **MEDICINAL CHEMISTRY.** Two credit hours. The organic chemistry of medicinal products. Structure-activity relationships will be stressed.
- 660 **CHEMICAL SEPARATIONS.** Two credit hours. Methods of chemical separation and their application in chemical analysis. Emphasis to be placed on the theory, techniques, and applications of current importance.
- 670 **CHEMICAL MEASUREMENTS.** Two credit hours. Methods for measuring the properties of chemical systems for the collection of analytical data. Modern methods will be stressed, especially those based on the optical and electrical properties of systems.
- 680 **INSTRUMENTAL METHODS.** One or two credit hours. A lecture and laboratory course to prepare the student for graduate study and research. Laboratory work consists of practice in the use of available instruments.
- 690 **SPECIAL TOPICS.** Two credit hours. Selections from the four major fields of chemistry. Varied topics representative of important phases of chemistry not treated in regular course work. The nature of the course material will be indicated by descriptive course titles, e.g., Polymer Chemistry, but the same course number will be retained.

- 692 **SPECIAL STUDY.** One credit hour. A short-term lecture series on special topics, emphasizing continuing education for practicing scientists. May be taken as a lecture series without credit. Nature of the course material will be indicated by descriptive subtitles.
- 699 **MASTER'S THESIS.** Six credit hours. Laboratory and library research under the supervision of a departmental research advisor. Problems may be selected from the general fields of organic, inorganic, analytical, or physical chemistry. A final written thesis is required for those desiring the Master's degree in chemistry. A charge will be made for materials and apparatus used in this work.

Classical Languages

Staff: DR. HARKINS, *chairman*; FR. BURKE, FR. FELTEN, FR. HETHERINGTON, DR. MURRAY, FR. PENDERGAST, DR. RETTIG.

Classical Culture (Cl)

Upper Division Courses

- 201 **CLASSICAL ARCHAEOLOGY.** Three credit hours. (Hs 201).
- 202 **HISTORY OF ANCIENT GREECE.** Three credit hours. See Hs 202.
- 204 **CHRISTIAN ANTIQUITY.** Three credit hours. See Hs 204.
- 206 **HISTORY OF ANCIENT ROME.** Three credit hours. See Hs 206.
- 207 **CONSTITUTIONAL HISTORY OF ROME.** Three credit hours. See Hs 207.
- 241 **GREEK LITERATURE IN TRANSLATION.** Three credit hours. (En 241).
- 244 **LATIN LITERATURE IN TRANSLATION.** Three credit hours. (En 244).
- 248 **CLASSICAL MYTHOLOGY.** Three credit hours. (En 248).
- 333 **MEN AND IDEAS OF GREECE AND ROME.** Three credit hours.

Greek (Gk)

Lower Division Courses

- 101 **ELEMENTARY GREEK.** Five credit hours. One semester.
- 102 **INTRODUCTION TO GREEK LITERATURE.** Five credit hours. One semester.
- 107 **XENOPHON.** Three credit hours.
- 108 **ST. LUKE.** Three credit hours.
- 112 **HERODOTUS: SELECTED READINGS.** Three credit hours.

- 117 **LYSIAS: SELECTED READINGS.** Three credit hours.
- 123 **GREEK PROSE COMPOSITION I.** Three credit hours.
- 124 **GREEK PROSE COMPOSITION II.** Three credit hours.
151. **HOMER.** Three credit hours. Readings from *The Iliad*.
- 152 **HOMER.** Three credit hours. Selected portions of *The Odyssey*.
- 162 **EURIPIDES: MEDEA.** Three credit hours.
- 172 **PLATO.** Three credit hours. *The Apology* and other selections.

Upper Division Courses

- 201 **CLASSICAL ARCHAEOLOGY.** Three credit hours. (Hs 201, Lt 201).
- 202 **HISTORY OF ANCIENT GREECE.** Three credit hours. See Hs 202.
- 204 **CHRISTIAN ANTIQUITY.** Three credit hours. See Hs 204.
- 207 **XENOPHON.** Three credit hours.
- 208 **DEMOSTHENES: PHILIPPICS AND OLYNTHIACS.** Three credit hours.
- 212 **HERODOTUS.** Three credit hours.
- 217 **LYSIAS.** Three credit hours.
- 248 **CLASSICAL MYTHOLOGY.** Three credit hours. (Lt 248, En 248, Cl 248).
- 251 **HOMER: ILIAD.** Three credit hours. A study of the Greek epic.
- 252 **HOMER: ODYSSEY.** Three credit hours.
- 260 **SOPHOCLES.** Three credit hours. *The Oedipus Tyrannus* and *Antigone*.
- 262 **EURIPIDES.** Three credit hours.
- 303 **DEMOSTHENES: THE CROWN.** Three credit hours.
- 313 **GREEK STYLE I.** Three credit hours.
- 314 **GREEK STYLE II.** Three credit hours.
- 331 **THUCYDIDES.** Three or four credit hours.
- 363 **AESCHYLUS.** Three credit hours.
- 364 **ARISTOPHANES.** Three credit hours.
- 371 **PLATO: THE REPUBLIC.** Three credit hours.
- 372 **PLATO: DIALOGUES.** Three credit hours.

- 388 **HISTORY OF GREEK LITERATURE.** Three credit hours.
 397 **SPECIAL STUDY.** Three credit hours. Greek poetry.
 398 **SPECIAL STUDY.** Three credit hours. Greek prose.
 399 **SENIOR COMPREHENSIVE REVIEW.** Two credit hours.

Graduate Courses

- 502 **GREECE TO 480.** Three credit hours.
 503 **GREECE, THE FIFTH CENTURY.** Three credit hours.
 512 **HERODOTUS.** Three credit hours.
 531 **THUCYDIDES.** Three credit hours.
 552 **HOMER.** Three credit hours.
 560 **SOPHOCLES: EARLY PLAYS.** Three credit hours.
 561 **SOPHOCLES: LATER PLAYS.** Three credit hours.
 562 **EURIPIDES.** Three credit hours.
 563 **AESCHYLUS.** Three credit hours.
 564 **ARISTOPHANES.** Three credit hours.
 571 **PLATO: UTOPIA.** Three credit hours.
 572 **PLATO: EARLY DIALOGUES.** Three credit hours.
 573 **PLATO: MIDDLE DIALOGUES.** Three credit hours.
 574 **PLATO: LATE DIALOGUES.** Three credit hours.
 575 **ARISTOTLE: NICOMACHEAN ETHICS.** Three credit hours.
 576 **ARISTOTLE: METAPHYSICS.** Three credit hours.
 589 **LONGINUS.** Three credit hours.
 604 **GREEK PALAEOGRAPHY.** Three credit hours.
 615 **GREEK AND ROMAN ART.** Three credit hours.
 616 **TOPOGRAPHY OF ANCIENT ATHENS.** Three credit hours.
 699 **MASTER'S THESIS.** Six credit hours.

Latin (Lt)

Lower Division Courses

- 101 **ELEMENTARY LATIN.** Five credit hours.
 102 **INTRODUCTION TO LATIN LITERATURE.** Five credit hours.
 113 **LATIN COMPOSITION I.** Three credit hours.
 114 **LATIN COMPOSITION II.** Three credit hours.
 115 **INTERMEDIATE LATIN.** Three credit hours. Review of grammar with special emphasis on reading and composition.
 117 **PHILOSOPHICAL LATIN.** Three credit hours. An intensive review of basic syntax intended to prepare students for the reading of philosophical texts in Latin.
 120 **THEOLOGICAL LATIN.** Three credit hours. Graded readings selected from the Latin Fathers and theological authors.
 128 **CICERO.** Three credit hours. The *De Senectute* and/or the *De Amicitia*.
 131 **HORACE: ODES.** Three credit hours.
 151 **VIRGIL: AENEID I-VI.** Three credit hours.
 153 **VIRGIL: AENEID VII-XII.** Three credit hours.

Upper Division Courses

- 201 **CLASSICAL ARCHAEOLOGY.** Two or three credit hours. (Hs 201, Gk 201)
 206 **HISTORY OF ANCIENT ROME.** Three credit hours. See Hs 206.
 207 **CONSTITUTIONAL HISTORY OF ROME.** Three credit hours. See Hs 207.
 211 **LIVY.** Three credit hours.
 212 **TACITUS: AGRICOLA, GERMANIA.** Three credit hours.
 220 **CICERO: PRO ARCHIA, PRO LEGE MANILIANA, AND PRO MARCELLO.** Three credit hours.
 221 **CICERO: PRO MILONE.** Three credit hours.
 222 **INTRODUCTION TO A STUDY OF THE LATIN FATHERS.** Three credit hours.
 231 **HORACE: ODES.** Three credit hours.
 248 **CLASSICAL MYTHOLOGY.** Three credit hours. (Gk 248, En 248, Cl 248)
 251 **VIRGIL: AENEID.** Three credit hours.

- 261 **ROMAN COMEDY.** Three credit hours.
- 301 **ROMAN ORATORY.** Three credit hours.
- 308 **CAESAR.** Three credit hours.
- 309 **PLINY: SELECTED LETTERS.** Three credit hours.
- 312 **TACITUS: THE ANNALS.** Three credit hours.
- 313 **ADVANCED LATIN COMPOSITION.** Three credit hours.
- 314 **LATIN STYLE.** Three credit hours.
- 318 **ROMAN HISTORIANS.** Three credit hours.
- 319 **CICERO: LETTERS.** Three credit hours.
- 327 **ROMAN METRICS.** Three credit hours.
- 328 **CICERO: ESSAYS.** Three credit hours.
- 331 **HORACE: SATIRES, EPISTLES.** Two or three credit hours.
- 332 **CATULLUS.** Three credit hours.
- 335 **EARLY CHRISTIAN POETS.** Three credit hours.
- 338 **MEDIAEVAL LATIN.** Three credit hours.
- 355 **JUVENAL.** Three credit hours.
- 371 **CICERO: TUSCULAN DISPUTATIONS.** Three credit hours.
- 372 **CICERO: DE OFFICIIS.** Three credit hours.
- 388 **HISTORY OF LATIN LITERATURE.** Three credit hours.
- 391 **LUCRETIVS.** Three credit hours.
- 397 **SPECIAL STUDY.** Three credit hours. Latin poetry.
- 398 **SPECIAL STUDY.** Three credit hours. Latin prose.
- 399 **SENIOR COMPREHENSIVE REVIEW.** Two or three credit hours.

Graduate Courses

- 505 **ROMAN REPUBLIC.** Three credit hours. (Hs 505).
- 506 **EARLY ROMAN EMPIRE.** Three credit hours. (Hs 506).
- 511 **LIVY.** Three credit hours.
- 512 **THE ANNALS OF TACITUS.** Three credit hours.

- 513 **THE HISTORIES OF TACITUS.** Three credit hours.
- 519 **LETTERS OF CICERO.** Three credit hours.
- 522 **CONFESSIONS OF SAINT AUGUSTINE.** Three credit hours.
- 531 **HORACE.** Three credit hours.
- 532 **CATULLUS.** Three credit hours.
- 533 **ROMAN ELEGY.** Three credit hours.
- 534 **ROMAN BIOGRAPHY.** Three credit hours.
- 551 **VIRGIL.** Three credit hours.
- 555 **JUVENAL.** Three credit hours.
- 556 **SEMINAR IN ROMAN SATIRE.** Three credit hours.
- 561 **ROMAN COMEDY.** Three credit hours.
- 604 **LATIN PALAEOGRAPHY.** Three credit hours.
- 614 **STYLISTIC LATIN.** Three credit hours.
- 624 **SEMINAR IN PATRISTIC LITERATURE.** Three credit hours.
- 627 **ROMAN METRICS.** Three credit hours.
- 638 **MEDIAEVAL LATIN.** Three credit hours.
- 680 **READING LIST I.** Three credit hours. Latin authors of the Republic.
- 681 **READING LIST II.** Three credit hours. Latin authors of the Augustan Age.
- 682 **READING LIST III.** Three credit hours. Latin authors of the Empire.
- 691 **EPICUREANISM AT ROME.** Three credit hours.
- 697 **HISTORICAL DEVELOPMENT OF THE LATIN LANGUAGE.** Three credit hours.
- 698 **SPECIAL STUDY.** Three credit hours.
- 699 **MASTER'S THESIS.** Six credit hours.

Communication Arts (CA)

Staff: FR. FLYNN, *chairman*; MR. KVAPIL, MR. MAUPIN, MR. SIEGFRIED.

Assisted by: MR. BECKER, MR. DINERMAN, MR. DOLL, MR. FORUSZ, MR. GARTNER, MR. GREENBERGER, MR. GUSHURST, DR. HAEFELE, MR. KESSINGER, MR. LUNSFORD, MR. PFEIFFER, MR. PRITCHETT, MR. WILSON, DR. WULF-TANGE, MR. YACKS.

The first six courses are required of CA majors. All courses listed are open to other students, as specified below.

Lower Division Courses

- 101 **ORAL COMMUNICATION.** Three credit hours. Fundamental principles of public speaking; invention and organization of materials. Style and delivery. Self-confidence and positive attitudes for public speaking and conversation. Practice in preparation. Delivery of extempore speeches.
- 102 **VOICE AND DICTION.** Three credit hours. Principles and practice in habits of correct breathing, quality, pitch, pause, variety, and rhythm. Study and practice of consonant and vowel articulation, of diacritical marks, of pronunciation, and of correct dictionary usage.
- 123 **BUSINESS CORRESPONDENCE I.** Two credit hours.
- 124 **BUSINESS CORRESPONDENCE II.** Two credit hours.

Upper Division Courses

- 201 **ORAL INTERPRETATION.** Three credit hours. Study of the communicative art of oral interpretation of literary material. Analysis of, and practice in, personality projection, body control, communication of mood and emotion, vocal amplification. Listening and audience response. Prerequisite or corequisite: CA 101 or 102, except for graduate students.
- 202 **SURVEY OF MASS MEDIA.** Three credit hours. Survey of organization and functions of newspapers, magazines, radio, television, film, and other mass media for communicating information to the public. Introductory study for concentration in the mass media.
- 203 **COMMUNICATION THEORY.** Three credit hours. Process of communication as it relates to language in operation. Linguistics and analysis of the form of language; psychology of the behavior of man; sociology of society. Process of feedback; interaction; the symbolic process; language usage and linguistics; perception; the self-image—the other-image; information theory; the culture concept.
- 204 **SOCIAL DYNAMICS OF COMMUNICATION.** Three credit hours. The role and meaning of communication in human relations. The effects of attitudes, belief systems, and prejudices on both verbal and non-verbal interactions between people and among groups. Theoretical considerations and practical demonstrations.

Electives

- 206 **CREATIVE PROBLEM SOLVING.** Two or three credit hours. Lecture material on the current knowledge of creativity and on individual and group methods to develop and to practice creative thinking. Practice of these techniques. Opportunity for optional creative work.
- 209 **AUDIOVISUAL COMMUNICATION.** Three credit hours. Relationship and audiovisual materials in the learning process. How these materials can enrich a particular field—their practical uses, advantages, limitations. Learning to make basic instructional materials and to use equipment. Role of the teacher and supervisor in an effective school program. (Ed 209)

Film

Certain film courses are taught at Xavier Symmes Studios

- 211 **INTRODUCTION TO FILM.** Three credit hours. Basic introduction to film as an art form—comparison with other art forms. Grammar, technology, business of film. Brief survey of film history. Film and television. Psychological and sociological aspects of film and television. Morality for the film-maker. Each student will make a short film.
- 212 **FILM HISTORY AND DIRECTORS.** Three credit hours. Complete survey of the history of the motion picture camera to current Hollywood and foreign film-makers and the new underground “*avant-garde*.” Screenings and discussion. Prerequisite or corequisite: CA 211 or 213.
- 213 **FILM COMMUNICATION.** Three credit hours. Visual communication in general. (Components: direction, line, color, shape, value, texture, motion, intervals, linear direction, space.) Film communication. Besides observing and criticizing visual components found in pictures taken by others, the student will take various assigned 35 mm stills and will complete various short films illustrating visual components.
- 214 **FILM CRITICISM.** Three credit hours. The philosophy of film. Arriving at critical criteria. Psycho-physical effects of film. Technique of film. Ethics and responsibility of the film-maker. Analysis and evaluation of many films with the student selecting one for detailed study. Prerequisite or corequisite: CA 211 or 213.
- 215 **FILM PROPAGANDA AND DOCUMENTARY.** Three credit hours. Use of propaganda films as a means of expression and persuasion. Techniques of documentary production through ideas of Grierson and Flaherty. Propaganda techniques through studies of Riefenstahl and Capra.
- 216 **FILM MAKING AND TECHNIQUES.** Three credit hours. Basic studies in the making of a film—economic, social, and technical—conducted by students under guidance, with emphasis on a pedagogical tool, as a creative art form.

Radio-Television

All radio-television courses, except CA 228, are taught at Xavier Symmes Studios.

- 221 **FUNDAMENTALS—RADIO-TELEVISION.** Three credit hours. History and development of radio and television as mass media influences on society. Radio and television systems. Relay and recording methods. Development of AM, FM, and TV stations and networks. Economy, laws, and regulations of broadcasting industry. Recommended for following courses.
- 222 **CONTINUITY WRITING.** Three credit hours. Fundamentals of effective commercial and program writing for radio and television. Duties and obligations of a writer. In-class writing assignments and critiques; lectures and discussions; homework assignments for stimulating the flow of ideas. Audio and visual aids for highlighting techniques. Emphasis on writing commercial copy. Prerequisite: En 101 or equivalent.
- 223 **RADIO PRODUCTION.** Three credit hours. Discussion of basic radio programming, including program evolution, cues, interviews, newscasting, radio plays. Use of sound effects, music, and other audio resources.
- 224 **BASIC EQUIPMENT OPERATION.** Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Examination of various phases of equipment from operational standpoint. Tools, techniques, and skills of radio and television. Use of microphones, sound effects, music, tape recorders, audio and video controls, film cameras, sets, and lighting. Studio demonstration and practice in basic program procedures.
- 225 **BASIC TV DIRECTION-PRODUCTION.** Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Principles and practice in directing and producing television and radio programs. Use of studio equipment in camera techniques, pictorial composition, video and audio skills. Class participation in small programs. Prerequisite or corequisite: CA 224.
- 226 **ADVANCED TV DIRECTION-PRODUCTION.** Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Theories and techniques of control room directing. Proper pre-planning, quick reaction to unforeseen problems, making best possible decisions, working with people. Theories of staging, pacing, and acting. Proper dramatic effect—when and how to achieve it. Format and pace of program for best balance and timing. Prerequisite: CA 225, or corequisite: CA 224.
- 227 **RADIO-TV PERFORMANCE.** Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Microphone and interpretative techniques. Guided practice in staff announcing, interviews discussion, and audience participation. Prerequisite: CA 101, 102.
- 228 **EDUCATIONAL TELEVISION.** Two to four credit hours. See Ed 228.

Theatre

- 231 **HISTORY OF THE THEATRE.** Three credit hours. A history of theatrical practice in the Western World. Examination of theatres and staging technique showing the influence of acting, directing, and scenic styles. The western theatre from the Greek to current times. The course will be taught with the assistance of visual aids.

- 232 **ACTING TECHNIQUES.** Three credit hours. (One hour of lecture, two hours of lab weekly.) Elements of acting with emphasis on coordinating speech and movement. Pantomime, improvisation, and acting. Technique of rehearsal, grouping, movement, tempo, rhythm, and line reading. Laboratory scenes. Practice in make-up. Prerequisite: CA 102 or approval of chairman.
- 233 **PLAY DIRECTING.** Three credit hours. Lecture-laboratory course covering basic aspects of play directing. Director's function in interpreting a play. Techniques involved in rendering this interpretation in oral and visible form in the theatre. Student participation in direction and stage management of productions.
- 234 **STAGECRAFT: THEATRE, TV, FILM.** Three credit hours. (Two hours of lecture, three hours of lab weekly.) Basic aspects of stagecraft for theatre, film, and television with emphasis upon the theory and practice of stage scenery construction and painting. Laboratory projects coordinated with XU Players and student workshop productions.
- 235 **PLAY PRODUCTION.** Three credit hours. Lecture-laboratory course covering basic aspects of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up.
- 236 **SCENIC DESIGN FOR PERFORMING ARTS.** Three credit hours. (Two hours of lecture, two hours of lab weekly.) Basic principles and history of pictorial and architectonic design as applied to drama, opera, ballet, concert, and performances in theatre, film, and television. Examination of the designer's multiple analysis of the script with practice in executing sketches, models, and working drawings. Laboratory projects coordinated with XU Players and student workshop productions. Prerequisite: CA 143.
- 237 **LIGHTING: THEATRE, TV, FILM.** Three credit hours. (Two hours of lecture, two hours of lab weekly.) Theories in the illumination of stage, film, and television productions. Examination of lighting instruments, control units, and color in the creation of aesthetic effects. Laboratory projects coordinated with XU Players and student workshop productions. Prerequisite: CA 143 or CA 112.

Journalism

- 241 **PRINCIPLES OF JOURNALISM.** Two or three credit hours. Fundamentals of modern journalism, newspapers, radio and television, and magazines. View of field of mass communication. Newspaper journalism; metropolitan and small town dailies, weeklies, community papers, and trade publications. Required for all other journalism courses.
- 242 **NEWS WRITING.** Three credit hours. Methods of reporting and writing news, including feature and special stories. Operation of a newspaper, administration of news staff, news values. Exercises in writing news stories.
- 243 **WRITING FOR MASS MEDIA.** Three credit hours. Writing style and format used by mass media; radio and television, newspapers, and magazines. Application of these principles in practical exercises. Use of pictures and film by the media. Role of staff writer and free lance writer in mass media. Strengths and weaknesses of the media.

Public Relations

- 251 **PUBLIC RELATIONS IN MODERN SOCIETY.** Three credit hours. Role of public relations in our modern world. Nature of communication and public opinion. Image concept and public relations research. Publicity and public relations techniques: writing the release for papers, radio, and television. Ethics. Qualifications for success.
- 252 **TECHNIQUES OF PUBLICITY.** Three credit hours. Problems of the news conference. Study of methods used to obtain publicity in mass media—radio, television, newspapers, and magazines. Practical writing experience in news releases. Health and welfare areas as subject matter. Criteria used by mass media to evaluate publicity.
- 253 **PUBLIC OPINION AND PROPAGANDA.** Three credit hours. Nature of public opinion and propaganda. Opinion research techniques. Characteristics of propaganda and its relationship to news and publicity. Propaganda techniques. Role of propaganda in American culture, especially in mass media, government, industry, and welfare.

Speech

- 261 **PERSUASION.** Three credit hours. Principles and techniques of attention, suggestion, and emotional appeals. Bases of belief and action. Ethical responsibility of advocacy. Discussion methods are used to teach the course. Development of, and skill in, persuasion through careful analysis of theory insight and through practice in persuasive speaking. Prerequisite: CA 101, 102, 201, or approval of Chairman.
- 262 **SPEECH DISORDERS.** Three credit hours. Basic concepts and principles of speech pathology. Normal speech development in children. Anatomy of the speech mechanisms. Symptoms, classification, and incidence of speech disorders.
- 263 **PHONETICS.** Three credit hours. Introduction to the phonetic structure of general American speech. Mastery of the International Phonetic Alphabet. Skill development in acoustic phonetic transcription. Analysis of dialects, distortions, and sound substitutions. Use of laboratory facilities.
- 264 **ARTICULATION DISORDERS.** Three credit hours. The literature pertaining to articulation disorders, including definition, diagnosis, and correction. Theory and practice in administration of articulation testing. Principles and methods for correcting articulation disorders. Observation at the Cincinnati Speech and Hearing Center and the Hamilton County Public School therapy program. Prerequisite: CA 263.

Practicums

Three hours of lab or private study, with approval of the Chairman and of instructor, carry one hour of credit, repeatable up to four hours. Prerequisite: a background of courses in a specific area.

- 271 **PRACTICUM IN FILM.** One credit hour. Individual work in such as the following: analysis and evaluation; criticism; a specific director; film production.

- 272 **PRACTICUM IN RADIO-TELEVISION.** One credit hour. Individual work in such as the following: programming, production, direction, writing.
- 273 **PRACTICUM IN THEATRE.** One credit hour. Individual work in such as the following: directing, acting, stage design, lighting, costuming, management.
- 274 **PRACTICUM IN JOURNALISM.** One credit hour. Individual work in such as the following: further research in methods of reporting and writing news, features, and stories; practical exercises in style and format used by mass media; appraisal of strengths and weakness of a specific medium.
- 275 **PRACTICUM IN PUBLIC RELATIONS.** One credit hour. Individual work in such as the following: public opinion study of a specific question; analysis of propaganda techniques in a specific study.
- 276 **PRACTICUM IN SPEECH.** One credit hour. Individual work in such as the following: critical analysis and evaluation of an effective speech; evaluation and analysis of a selection for oral interpretation; study of style in speaking.

Institutes and Workshops

- 281 Institute: **BASIC FILM MAKING** (summer Intersession only). Two credit hours. Lectures and film demonstrations (shorts and features) dealing with the evolution of the silent to the sound film. Grammar, technology, and business of film. Film as an art form.
- 282 Institute: **FILM—SIGNIFICANT DIRECTORS** (summer Intersession only). Two credit hours. Lectures and film demonstrations dealing with theories, techniques, and artistic creation of such directors as Flaherty, Eisenstein, Bergman, Fellini, and the underground film makers.
- 283 Workshop: **CLASSROOM USE OF EDUCATIONAL TV** (summer Intersession only). Two credit hours. Coordination of classroom teaching and television instruction. Role of the teacher on the screen and of his classroom colleagues. Scheduling problems. Demonstration TV lessons. Conference arrangements. Materials for TV instruction.
- 284 Workshop: **ORAL COMMUNICATION FOR TEACHERS** (summer). Three credit hours. Principles, performance, and practice to help the teacher's effectiveness in the classroom. Study of voice, diction, bodily action, development of ideas, speaking, oral interpretation, discussions, and conferences. (Ed 284)
- 285 Workshop: **THEATRE CLASSICS** (summer). Three credit hours. (One hour of lecture, three hours of lab.) Study and practice in all aspects of production: selection of play, rehearsals, blocking, line-reading, directing, lighting, costuming. Emphasis on classical theatre. Arena theatre facilities.
- 286 Workshop: **PLAY PRODUCTION** (summer). Three credit hours. (one hour of lecture, three hours of lab.) Lecture-laboratory course covering basic aspects of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up. Emphasis on modern plays.

Economics (Ec)

Staff: DR. DONNELLY, *chairman*; FR. BESSE, DR. BRYANT, DR. CLICKNER, DR. DREESE, DR. GORDON, DR. HAILSTONES, DR. LINK, DR. MASTRIANNA, DR. RAMINENI, DR. SCHULTZ, DR. WILLIAMS.

Assisted by: MR. CISSELL, DR. FREIBERG, MR. MANLEY, MR. ROTHWELL, DR. THIEMANN.

Lower Division Courses

- 100 **PRINCIPLES OF ECONOMICS.** Three credit hours. The standard foundation course for all fields of study in Economics and Business Administration. The course covers the fundamental principles governing present day business and economic activity.
- 101 **PRINCIPLES OF ECONOMICS.** Three credit hours. The study and analysis of selected problems in the field of business economics. Prerequisite: Ec 100.
- 122 **CALCULUS OF ONE VARIABLE** (Business applications). Three credit hours. See Mt 122. Prerequisite Mt 112.

Upper Division Courses

- 200 **MICROECONOMIC ANALYSIS.** Three credit hours. An advanced study of economic principles including an analysis of such fundamental concepts as value and price, rent, interest, wages and profits and their relation to the current problems of production, distribution, and exchange. Prerequisite: Ec 100.
- 201 **MACROECONOMIC ANALYSIS.** Three credit hours. An analysis of the determinants of Gross National Product, employment levels, and rates of economic growth. The analysis is conducted within a framework of principles and relationships derived from the still developing body of modern macroeconomic theory. Prerequisite: Ec 101.
- 202 **HISTORY OF ECONOMIC THOUGHT.** Three credit hours. World economic movements. Analysis of literature in the field. Theories of economics advanced by Aristotle, Saint Thomas Aquinas, Adam Smith, Ricardo, Mills, Malthus, George, Clark, Bentham, Jevons, Keynes, and others. Prerequisite: Ec 100, 101.
- 210 **HUMAN RESOURCES.** Three credit hours. See Mg 210. Prerequisite: Ec 100. (IR 210, Mg 210)
- 222 **ECONOMETRICS.** Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Ec 112.
- 232 **MATHEMATICS FOR ECONOMISTS.** Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Ec 122.

- 235 **ECONOMIC HISTORY OF THE UNITED STATES.** Three credit hours. Development of the American economy from the period of colonization to the present. Traces the progress of population, agriculture, industry, domestic and foreign commerce, banking and finance, and transportation. Integrates the economic, social, and political development in the United States.
- 240 **ECONOMIC GEOGRAPHY.** Three credit hours. World geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries.
- 250 **MONEY AND BANKING.** Three credit hours. See Fi 250. Prerequisite: Ec 100, 101.
- 255 **BUSINESS FINANCE.** Three credit hours. See Fi 255.
- 290 **SURVEY OF ACCOUNTING.** Three credit hours. Geared to acquaint the non-accountant with the functions that underlie the creation of financial statements. The proper presentation of all items on the statement. Their use as tools by management in planning present and future business activity.
- 300 **LABOR RELATIONS.** Three credit hours. See IR 300.
- 310 **CURRENT LABOR PROBLEMS.** Three credit hours. See IR 310.
- 311 **HISTORY OF THE LABOR MOVEMENT.** Three credit hours. See IR 311.
- 313 **LABOR LEGISLATION.** Three credit hours. See IR 313.
- 320 **ECONOMIC THEORY AND SOCIAL ORDER.** Three credit hours. Economics from the viewpoint of Christian ethics. The Encyclicals as they affect the science of economics and business. A course intended to help the future businessman plan and preserve a code of ethics founded on Christian principles. Prerequisite: Ec 100, 101.
- 330 **GOVERNMENT AND BUSINESS.** Three credit hours. The structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations: the due process of law regulations, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Po 330)
- 335 **PUBLIC FINANCE AND TAXATION.** Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. Prerequisite: Ec 101. (Po 335)
- 341 **COMPARATIVE ECONOMIC SYSTEMS.** Three credit hours. Origin and development of various economic systems; analysis of their operations and purposes; a comparison of the principal types—Socialism, Fascism, Communism—with Capitalism. Prerequisite: Ec 100
- 343 **ECONOMICS OF THE COMMUNIST STATE.** Three credit hours. The fundamental principles of Marxist Communism; their origins in the writings of Marx, Engels, Lenin, and Stalin; their relative importance; popular and orthodox communism; critical analysis of contemporary arguments against communism. Prerequisite: Ec 100, 101.

- 345 **INTERNATIONAL TRADE.** Three credit hours. The theory, policy, and practice of United States trade with the rest of the world. Theory is covered to gain a body of knowledge needed to understand the causal relationships that underlie international economic transactions. Policy is studied to discover the role of government in international trade as well as international agreements between private producers. Practice is studied to understand the conduct of international business. Prerequisite: Ec 200.
- 360 **CURRENT ECONOMIC PROBLEMS.** Three credit hours. Current problems in labor, monetary, and fiscal policy, debt management, social security legislation, public regulation of business and agriculture form a basis of discussion and analysis. Prerequisite: Ec 100, 101 and six hours' upper-division courses.
- 397 **TUTORIAL COURSE.** Two or three credit hours. Special reading and study for advanced students.
- Other courses are acceptable for a major in economics at the discretion of the Chairman or the student's advisor.

Graduate Courses

- 521 **ADVANCED ECONOMIC THEORY I.** Three credit hours. An advanced comprehensive study of the economic principles of price theory. Analyses are conducted within a framework of traditional and modern contributions in the field.
- 522 **ADVANCED ECONOMIC THEORY II.** Three credit hours. Analysis of theories of employment, including classical, Keynesian, and modern, and the interrelationships implied in the determination of interest rates, the demand and supply for money, price levels, growth, and development. Monetary and fiscal policy are studied in light of these theories.
- 523 **QUANTITATIVE TECHNIQUES IN ECONOMIC ANALYSIS.** Three credit hours. Concepts and techniques of economic theory: elasticity, marginal analysis, linear programming, capital budgeting. Quantitative methods in solution of selected economic problems.
- 524 **SEMINAR: DEVELOPMENT OF ECONOMIC THOUGHT.** Three credit hours. The development of Neo-Classical and contemporary economic thought. It includes a study of the rise of marginalism; the theories of production, partial equilibrium, and general equilibrium; the growth of welfare economics.
- 530 **APPLIED ECONOMIC ANALYSIS.** Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction is used.
- 532 **BUSINESS FORECASTING.** Three credit hours. (BA 532)
- 535 **GOVERNMENT REGULATIONS OF BUSINESS.** Three credit hours. See BA 535.
- 538 **ECONOMICS OF LABOR.** Three credit hours. Determinants of the competitiveness of labor markets; study of economic determinants of employment levels. Seminar method is used. (BA 538)

- 539 **SEMINAR: CURRENT ECONOMIC PROBLEMS.** Three credit hours. (BA 539)
- 542 **ECONOMIC GROWTH AND DEVELOPMENT.** Three credit hours.
- 544 **INTERNATIONAL ECONOMIC PROBLEMS.** Three credit hours. (BA 634)
- 546 **LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY.** Three credit hours. See BA 546.
- 548 **TRANSPORTATION ECONOMICS.** Three credit hours. (BA 638).
- 550 **PROBLEMS IN BUSINESS FINANCE.** Three credit hours. See BA 550.
- 552 **INVESTMENT MANAGEMENT.** Three credit hours. See BA 552.
- 556 **MONETARY INSTITUTIONS AND POLICY.** Three credit hours.
- 558 **FISCAL POLICY AND PUBLIC FINANCE.** Three credit hours.
- 612 **SEMINAR: COLLECTIVE BARGAINING.** Three credit hours. See BA 612.
- 690 **BUSINESS AND SOCIETY.** Three credit hours. (BA 690).
- 695 **SPECIAL STUDY.** Credit by arrangement.
- 696-697 **THESIS.** Six credit hours.
- 698-699 **RESEARCH SEMINAR.** Six credit hours.

Education (Ed)

Staff: DR. McCOY, *chairman*; DR. ANDERSON, DR. CLARKE, MR. COCKS, MR. GAFFNEY, MR. HAHN, DR. HALE, DR. HANNA, MR. HELMES, DR. MARY GRACE KLEIN, MR. LaGRANGE, DR. LINK, DR. LOZIER, MR. MARTIN, MISS McDERMOTT, DR. PARTRIDGE, MRS. ROTHCHILD, MR. SCHEURER, MR. SCHWEIKERT, DR. SOMMER, MR. SULLIVAN, DR. VORDENBERG, DR. CATHERINE WULFTANGE.

Assisted by: MR. BECKER, MR. BISHOP, MR. BOLSEN, MR. DAILY, DR. GAROFALO, MR. GRILL, MR. HENDERSON, MR. HILVERS, DR. HOGAN, MRS. JONES, MR. MATTHEWS, MR. H. MORSE, MR. PICKERING, MR. SETA, MR. STEELE, MR. WERNER, MRS. WERNERSBACH, SR. ROSEMARY WINKLEJOHANN, MR. YACKS, AND THE DEPARTMENT OF PSYCHOLOGY.

FOR INFORMATION ABOUT TEACHER CERTIFICATION, SEE TEACHER CERTIFICATION IN INDEX.

Lower Division Courses

- 131 **PRINCIPLES OF EDUCATION.** Three credit hours. The role of the school in society.
- 141 **EDUCATIONAL PSYCHOLOGY.** Three credit hours. Psychological principles applied to learning and teaching. Prerequisite: Ps 101. (Ps 141)

Upper Division Courses

- 201 **SECONDARY METHODS.** Two credit hours. Methodology applicable to high school teaching in general. Methods best suited to each of the major content fields. UNDERGRADUATE CREDIT ONLY.
- 202 **SECONDARY CURRICULUM.** Two credit hours. Functions of modern American secondary education; curricular experiences; new technology as applied to the curriculum. UNDERGRADUATE CREDIT ONLY.
- 203 **STUDENT TEACHING.** Six credit hours. Laboratory experience in high school teaching under the supervision of a critic teacher for one semester. UNDERGRADUATE CREDIT ONLY.
- 205 **TEACHING MODERN LANGUAGES.** Three credit hours. Further command of the student's language with a view to teaching effectiveness and the psychology of language learning—motivation, evaluation, and testing. Special problems. (ML 105)
- 206 **PLANNED OBSERVATION AND PARTICIPATION.** Three credit hours. A special course offered only to students preparing to be school psychologists. UNDERGRADUATE CREDIT ONLY.
- 207, 208 **TEACHING INTERNSHIP I, II.** Six credit hours, two semesters. A teaching internship open only to fully employed graduate students teaching on sub-standard certificates. In each semester the teacher is supervised by a clinical professor in the student's area of major competency. A 30-clock-hour seminar is part of the internship. Ed 548: Current Problems of Secondary Education, two credit hours, a professional problems seminar, must be taken as a supplement to the internship. UNDERGRADUATE CREDIT ONLY.
- 209 **AUDIO-VISUAL COMMUNICATION.** Two to four credit hours. See CA 209.
- 211 **STATISTICAL METHODS.** Two or three credit hours. See Ps 211.
- 214 **METHODS OF TEACHING READING.** Three credit hours.
- 218 **SOCIAL CASE WORK.** Two or three credit hours. (So 218)
- 219 **PROBLEMS OF MODERN STUDENTS.** Two credit hours. (So 219)
- 228 **EDUCATIONAL TELEVISION.** Two to four credit hours. (CA 228)
- 231 **DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. See Ps 231.
- 232 **CHILD PSYCHOLOGY.** Two or three credit hours. See Ps 232.
- 233 **ADOLESCENT PSYCHOLOGY.** Two credit hours. See Ps 233.
- 235 **DIFFERENTIAL PSYCHOLOGY.** Two credit hours. See Ps 235.
- 237 **PSYCHOLOGY OF LEARNING.** Three credit hours. See Ps 237.
- 239 **PSYCHOLOGY OF MOTIVATION.** Three credit hours. See Ps 239.
- 261 **SOCIAL PSYCHOLOGY.** Two credit hours. See Ps 261. (So 258)
- 263 **THEORIES OF PERSONALITY I.** Two credit hours. See Ps 263.

- 264 **THEORIES OF PERSONALITY II.** Two credit hours. See Ps 264. This course may be taken separately from Ed 263.
- 266 **CRIME AND PERSONALITY.** Two credit hours. See Ps 266.
- 271 **INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 271)
- 272 **GUIDING THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 272)
- 273 **EDUCATING THE DISTURBED CHILD.** Two credit hours. (Ps 273)
- 274 **MENTAL HYGIENE.** Two credit hours. See Ps 274.
- 275 **DYNAMIC PSYCHOLOGY.** Two credit hours. See Ps 275.
- 276 **PSYCHOLOGY OF DELINQUENCY.** Two credit hours. See Ps 276.
- 277 **ABNORMAL PSYCHOLOGY.** Two or three credit hours. See Ps 277.
- 279 **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Two or three credit hours. Commonly used group tests; testing procedures and rationale underlying tests of intelligence, aptitude, achievement, interest, and personality. Selecting and evaluating specific group tests in these areas. (Ps 279)
- 283 **PRACTICUM IN PSYCHOLOGICAL TESTING.** Two or three credit hours. See Ps 283.
- 284 **ORAL COMMUNICATION: WORKSHOP FOR TEACHERS.** Three credit hours. See CA 284.
- 292 **JUVENILE DELINQUENCY.** Two or three credit hours. (So 292).
- 293 **JUVENILE CORRECTIONS.** Two or three credit hours. (So 293).
- 294 **PROBATION AND PAROLE.** Two or three credit hours. (So 294).
- 315 **NEW MATHEMATICS: ELEMENTARY SCHOOL TEACHERS.** Two or three credit hours.
- 316 **NEW MATHEMATICS: SECONDARY SCHOOL TEACHERS: ALGEBRA.** Two credit hours.
- 325 **CHILDREN'S LITERATURE.** Three credit hours.
- 370 **COACHING: WRESTLING.** Two credit hours. Elective open to upper division students only.
- 371 **COACHING: TUMBLING AND GYMNASTICS.** Two credit hours. Elective open to upper division students only.
- 372 **COACHING: FOOTBALL.** Two credit hours.
- 373 **COACHING: BASKETBALL.** Two credit hours.
- 374 **COACHING: BASEBALL.** One credit hour.

- 375 **COACHING: TRACK AND FIELD.** One credit hour.
- 376 **THEORY OF OFFICIATING.** Two credit hours. Elective open to upper division students only.
- 377 **ADMINISTRATION OF PHYSICAL EDUCATION.** Three credit hours. The principles, organization, and administration of the physical education program and the development of the intramural athletic program.
- 378 **ADMINISTRATION OF HEALTH EDUCATION.** Three credit hours. Methods and materials for teaching health. The selection of health material, organizational techniques, and the administration of the school health program.
- 379, 380 **PHYSICAL EDUCATION METHODS AND MATERIALS.** Four credit hours, two semesters. The theory and practice of teaching physical education. Subject matter for use in teaching touch football, soccer and speedball, organized games, tumbling and apparatus, basketball, volleyball, conditioning, track and field, softball, physical education tactics and testing.
- 381, 382 **HEALTH AND HYGIENE.** Four credit hours, two semesters. Ed 381 includes the American Red Cross Standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 382 includes personal and community hygiene for use in teaching that subject.
- 383 **RED CROSS LIFE SAVING.** One credit hour. FOR UNDERGRADUATE CREDIT ONLY.
- 384 **LIFE SAVING AND WATER SAFETY.** Two credit hours. A combined course. FOR UNDERGRADUATE CREDIT ONLY.
- 397 **SPECIAL STUDY.** Two or three credit hours.
- 398 **TUTORIAL COURSE.** Credit to be arranged. Special reading and directed study of advanced students.

Graduate Courses

The Department of Education of the Graduate School is organized to offer the in-service teacher or school administrator opportunities for advanced professional training through individual courses or through balanced programs leading to the Master of Education degree.

Ed 501, 503, 505, 507 are required of all Candidates for M.Ed. Degree

- 501 **PHILOSOPHY OF EDUCATION.** Three credit hours. The historical development of educational philosophy and theories. Evaluation of major current philosophies.
- 503 **EDUCATIONAL PSYCHOLOGY.** Three credit hours. Major issues in the field of methods and educational psychology. The learning process. Factors influencing learning. The nature and extent of individual differences.
- 505 **EDUCATIONAL ADMINISTRATION.** Three credit hours. The role of the federal, state, and local governments. School management including an overview of instructional personnel, business management, research, community relations, and various responsibilities of the administrator.

- 507 **EDUCATIONAL RESEARCH.** Three credit hours (2/1). In this course two credit hours are devoted to major techniques and methods of educational research; comprehension of statistical terminology of research; and locating educational research on a given problem. The remaining credit hour is awarded on completion of an actual research project. A separate grade is given for each phase of the course.
- 511 **ADVANCED STATISTICS.** Three credit hours. See Ps 511.
- 514 **EDUCATIONAL SOCIOLOGY.** Two credit hours. Discussions and seminar work on current social problems in relation to education; e.g., poverty, race relations, population moves, social control of schools, religious tensions, etc.
- 517 **TEACHING HIGH SCHOOL ENGLISH.** Three credit hours.
- 523 **SEMINAR: BUSINESS EDUCATION.** Three credit hours.
- 524 **PROGRAMS FOR THE DISADVANTAGED CHILD.** Two credit hours.
- 530 **LEARNING AND MOTIVATION.** Two or three credit hours. See Ps 530.
- 532 **EDUCATIONAL AND VOCATIONAL GUIDANCE.** Two credit hours. The school's responsibility for moral, social, and vocational guidance. Essentials of an adequate guidance program. (Ps 532)
- 533 **COUNSELLING PRINCIPLES AND TECHNIQUES.** Two credit hours. Theory of counselling. Case method. Relationships to testing and to other sources of data. Interviewing. Place and value of records. Clinical procedures. (Ps 533)
- 534 **ELEMENTARY SCHOOL GUIDANCE.** Two credit hours.
- 535 **OCCUPATIONAL INFORMATION AND JOB ANALYSIS.** Two credit hours. (Ps 535)
- 536 **GROUP GUIDANCE.** Two credit hours. Theory and practice. (Ps 536)
- 539 **GUIDANCE LABORATORY.** Two credit hours. Study of individual pupils; collecting pertinent data, interviewing, recording, diagnosis, inter-agency collaboration. Praticum. Prerequisites: Ed 532, 533.
- 541 **ELEMENTARY SCHOOL ADMINISTRATION.** Two credit hours. Criteria for an effective elementary school organization. Patterns of school organization. Administrative problems.
- 542 **SECONDARY SCHOOL ADMINISTRATION.** Two credit hours. Organization of secondary schools. Techniques of schedule-making. Administrative problems.
- 543 **SUPERVISION OF INSTRUCTION.** Two credit hours. Techniques of improving instruction through supervision.
- 544 **ELEMENTARY CURRICULUM.** Two credit hours. Aims of elementary education. Specific objectives of primary and upper-elementary divisions. Classroom techniques for realizing these objectives.

- 545 **SECONDARY CURRICULUM.** Two credit hours. Aims of secondary education. Specific objectives of curricular areas. Classroom techniques for realizing these objectives.
- 547 **CURRENT PROBLEMS OF ELEMENTARY EDUCATION.** Two credit hours. A seminar.
- 548 **CURRENT PROBLEMS OF SECONDARY EDUCATION.** Two credit hours. A seminar.
- 562 **SCHOOL PUBLIC RELATIONS.** Two credit hours. Relations of school and community. Effective use of media of public relations—press, radio, television.
- 563 **SCHOOL BUSINESS MANAGEMENT PROBLEMS.** Two credit hours. Techniques of budgetary control, public and internal funds. School purchasing. Food service. Supplies. Equipment and machinery. School insurance. Plant records. Maintenance and repair. Pupil transportation. School investment. Management techniques.
- 564 **ADMINISTRATION OF STAFF PERSONNEL.** Two credit hours.
- 565 **SCHOOL LAW.** Two credit hours. Legal framework within which schools operate. Federal and state precedents. State code. Legal provisions for school finance.
- 566 **SCHOOL FINANCE.** Two credit hours.
- 567 **SCHOOL BUILDINGS.** Two credit hours.
- 580 **PSYCHOPATHOLOGY.** Two credit hours. (Ps 580)
- 582 **INDIVIDUAL TESTS OF INTELLIGENCE.** Four credit hours. Underlying theory, administration, scoring, interpretation, and reporting of the individual tests of intelligence. (Ps 582)
- 590 **ADMINISTRATION OF SCHOOL ATHLETICS.** Three credit hours. Investigation and discussion of current problems and policies pertinent to administration of school athletics.
- 591 **LEADERSHIP IN OUTDOOR EDUCATION.** Three credit hours. Consideration is given to settings for outdoor education, school camp functions, and administration. Emphasis on group and individual camping techniques.
- 592 **ADMINISTRATION OF INTRAMURAL ATHLETICS.** Three credit hours. Treatment of administrative problems, policies, and procedures involved in intramural athletics as applied to school systems.
- 593 **FACILITIES FOR PHYSICAL EDUCATION, HEALTH, AND RECREATION.** Three credit hours. A study of plan and facilities for physical education, health, and recreation program construction, use, maintenance, safety as related to the total school and community program.
- 594 **PHYSICAL EDUCATION FOR THE HANDICAPPED.** Three hours. Methods, materials, and programs for the organization and administration of physical education to meet the special needs of atypical individuals in schools and the community.

- 595 **ADMINISTRATION OF COMMUNITY RECREATION.** Three credit hours. Structure and principles as they are related to the organization and administration of school and community recreational programs.
- 596 **ADMINISTRATION OF PHYSICAL FITNESS PROGRAMS.** Three credit hours. Activities designed to enhance the primary components of physical fitness. Included are recommendations for organizing and administering a functional physical fitness program for the various sports, physical education, and the individual.
- 600-629 **SPECIAL WORKSHOPS, INSTITUTES, SEMINARS.** One to six credit hours as designated. Courses will be specified as to title when offered.
- 631 **ADVANCED DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. (Ps 645)
- 634 **PSYCHOLOGY OF THE EXCEPTIONAL CHILD.** Two or three credit hours. (Ps 646)
- 640 **SEMINAR: SELECTED ADMINISTRATIVE PROBLEMS.** Two credit hours.
- 641 **SEMINAR: ISSUES IN HIGHER EDUCATION.** Two credit hours.
- 647 **CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 647)
- 648 **PRACTICUM: TEACHING EMOTIONALLY DISTURBED CHILDREN.** Two or three credit hours. (Ps 648)
- 651 **MONTESSORI EDUCATION: PHILOSOPHICAL APPROACH.** Three credit hours. A seminar in Montessori: Emphasis is on philosophy, historical development, contemporary critique, current methodology, and classroom observation. A variety of resources is used and involvement of the student is expected.
- 652 **MONTESSORI EDUCATION: PSYCHOLOGICAL BASES.** Three credit hours. Deals primarily with psychological research findings directly or indirectly related to childhood education. Three basic principles of Montessori education reviewed in detail: the importance of early enriched environment, critical periods for learning, and the role of the early activation drive for learning. Recent experimental findings in play theory, beauty, creativity, and development of self-esteem reviewed and related. (Ps 652)
- 653 **MONTESSORI EDUCATION: DEVELOPMENTAL ASPECTS.** Three credit hours. The developmental aspects of the pre-schooler. Current theory and research in the early development literature are related to Maria Montessori's concept of the child. (Ps 653)
- 654 **MONTESSORI METHODS AND MATERIALS: SENSORY LEVEL.** Three credit hours. Sensorial materials introducing natural sciences, geography, numbers, writing, reading. Creative activities. Practical life exercises. Prepared environment.
- 655 **MONTESSORI METHODS AND MATERIALS: ABSTRACT LEVEL.** Three credit hours. Transition from concrete to abstract learning in natural sciences, social studies, arithmetic, language arts, music, dramatic activities, art. Techniques of observation and evaluation.

- 657 **MONTESSORI INTERNSHIP I.** Three credit hours.
- 658 **MONTESSORI INTERNSHIP II.** Three credit hours.
- 660 **INSTRUCTIONAL SYSTEMS.** Three credit hours.
- 661, **PRACTICUM: INSTRUCTIONAL SYSTEMS.** Six credit hours. Two
662 semesters.
- 670 **PSYCHOLOGY OF READING.** Two credit hours. (Ps 670)
- 671 **REMEDIAL READING.** Two credit hours. The reading process. Reading disability and its psychological problems. Diagnosis of disability. Remedial instruction.
- 672 **NEW THEORIES IN TEACHING READING.** Two credit hours.
- 678 **DIAGNOSIS AND CORRECTION OF READING DISABILITIES.** Three credit hours. A study of the major factors associated with reading problems; diagnostic tests and remedial procedures. Prerequisite: Ed 670.
- 679 **LABORATORY PRACTICUM IN READING.** Three credit hours. Supervised practice in remedial and developmental reading. Prerequisite: Ed 678.
- 680 **COMPUTER THEORY AND PROGRAMMING.** Two credit hours.
- 681 **DATA PROCESSING AND COMPUTER TECHNIQUES.** Two credit hours.
- 685, **INTERNSHIP IN SCHOOL RESEARCH.** Twelve credit hours, two
686 semesters.
- 688 **RESEARCH: HISTORY AND PHILOSOPHY OF EDUCATION.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 689 **RESEARCH: ADMINISTRATION.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 690 **RESEARCH: SECONDARY EDUCATION.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 691 **RESEARCH: ELEMENTARY EDUCATION.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 692 **RESEARCH: GUIDANCE.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 693 **RESEARCH: READING.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 694 **RESEARCH: PSYCHOLOGY.** One or two credit hours. Individual research. Prerequisite: Ed 507.
- 695 **RESEARCH: SPECIAL AREA.** One or two credit hours. Individual research in any special area to be specified. Prerequisite: Ed 507.

- 698 **SPECIAL STUDY:** Two or three credit hours.
- 699 **MASTER'S THESIS.** Six credit hours. For students desiring a program leading to the degree of Master of Arts.

English (En)

Staff: FR. SAVAGE, *chairman*; MR. CASTILLON, FR. CONNOLLY, DR. DOERING, MR. FELDHAUS, MR. FONTANA, MR. GETZ, MR. J. A. GLENN, MR. J. P. GLENN, DR. McNALLY, FR. SULLIVAN, DR. WENTERSDORF, MR. WESLING, DR. WHEELER, DR. WILLER.

Assisted by: MR. SCHWEIKERT.

Graduate Assistants: MR. CAHILL, MR. DUNCAN, MR. FRANCIS, MR. HUDSON, MR. KAYNIS, MR. KORAL, MR. MEYER, MR. QUIGLEY.

Lower Division Courses

- 101 **ENGLISH COMPOSITION.** Three credit hours. Practice in effective writing.
- 113 **RHETORIC AND LITERATURE.** Three credit hours. Intensified instruction and practice in effective writing. Selected readings in British non-fictional prose. Required of English majors.
- 114 **RHETORIC AND LITERATURE.** Three credit hours. Complements En 113 with selected readings in British fiction. Required of English majors.
- 121 **STUDIES IN POETRY.** Three credit hours. Study and critical evaluation of English and American poetry.
- 122 **STUDIES IN DRAMA.** Three credit hours. Nature of drama and the theater; evaluation of representative plays.
- 124 **STUDIES IN FICTION.** Three credit hours. Critical evaluation of representative novels. Not open to students who have completed En 114.
- 131 **SURVEY OF ENGLISH POETRY.** Three credit hours. British poetry according to genre and within its historical context from *Beowulf* to the Twentieth Century. Required of all English majors. Not open to students who have completed En 121.
- 132 **SURVEY OF ENGLISH DRAMA.** Three credit hours. British drama according to genre and within its historical context from the Middle Ages to the Twentieth Century. Required of all English majors. Not open to those who have completed En 122.

Upper Division

- 200 **ADVANCED COMPOSITION FOR TEACHERS.** Three credit hours. For students preparing to teach English in the secondary school.

- 201 **TEACHING ENGLISH: COMPOSITION.** Three credit hours. Techniques and methods in teaching composition, especially exposition and argumentation. Open only to graduate assistants.
- 202 **TEACHING ENGLISH: LITERATURE.** Three credit hours. Techniques and methods in teaching the short story and the novel together with approaches to the critical essay. Open only to graduate assistants.
- 203 **HISTORY OF THE ENGLISH LANGUAGE.** Three credit hours. Origins and development of the English language between c. 450 and the present day, with special reference to etymology and vocabulary, syntax and grammar, semantics, and phonology.
- 248 **CLASSICAL MYTHOLOGY.** Three credit hours. By permission only. (Gk/Lt 248)
- 260 **AESTHETICS AND LITERARY CRITICISM.** Three credit hours. Philosophical basis of aesthetics; elements of taste; critical standards.
- 261 **HISTORY OF LITERARY CRITICISM.** Three credit hours. Major critics of literature from Aristotle to T. S. Eliot.
- 280 **THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE.** Three credit hours. The religious significance of themes found in contemporary poetry, fiction, and drama.
- 288 **SEVENTEENTH CENTURY ANGLICAN LITERATURE.** An examination of a select number of continental religious and mystical works and their relationships to the ideas and structure of Seventeenth-Century English prose and poetry.
- 301 **MAJOR BRITISH AUTHORS: CHAUCER-JOHNSON.** Three credit hours.
- 302 **MAJOR BRITISH AUTHORS: WORDSWORTH-ELIOT.** Three credit hours.
- 308 **MEDIEVAL ENGLISH LITERATURE.** Three credit hours. Nonlinguistic survey exclusive of Chaucer.
- 310 **CHAUCER: THE CANTERBURY TALES.** Three credit hours. Brief introduction to Middle English and a detailed study of Chaucer's *Canterbury Tales*, with some reference to Chaucer's life and literary career.
- 315 **THE ENGLISH RENAISSANCE.** Three credit hours. Tudor prose and poetry with emphasis on the prose of politics, religion, and the making of a gentleman, and on the poetry of Sidney and Spenser. The Italian Renaissance and its influence on the English writers of the period.
- 325 **SHAKESPEARE.** Three credit hours. About half of Shakespeare's plays with emphasis on the best. Representative plays of the four periods of his writing and plays of the four major types—tragedy, comedy, history, and tragi-comedy.
- 326 **SHAKESPEARE: HISTORIES AND COMEDIES.** Three credit hours. The nature and development of the Shakespearean "history" as a dramatic type and of Shakespearean comedy (farce, romantic comedy, high comedy, and problem comedy).

- 327 **SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES.** Three credit hours. The nature and development of Shakespearean tragedy in the light of contemporary traditions and of the Aristotelian concept of tragedy, as well as a study of the Shakespearean "romance" or tragi-comedy as a dramatic type.
- 330 **SEVENTEENTH CENTURY LITERATURE.** Three credit hours. Milton is not included.
- 335 **MILTON.** Three credit hours. Milton's poetry and major prose studied for its art, its rhetoric, and its place in intellectual and literary history.
- 340 **NEO-CLASSICAL LITERATURE.** Three credit hours. Poetry and prose of the period from Dryden to the forerunners of Romanticism, including a brief treatment of the novel of the period.
- 344 **THE ENGLISH NOVEL TO HARDY.** Three credit hours. The development of the English novel from Richardson and Fielding to Thomas Hardy.
- 350 **ROMANTIC LITERATURE.** Three credit hours. English romantic poetry and selected prose from Thomson to Keats, Emphasis on Wordsworth, Coleridge, Byron, Shelley, Keats.
- 360 **VICTORIAN POETRY.** Three credit hours. Textual and critical study of selected works of Victorian poets from 1830 to 1910, with particular emphasis on Tennyson, Browning, Arnold, the Pre-Raphaelites, Hardy, Housman, and Hopkins.
- 361 **VICTORIAN NON-FICTIONAL PROSE.** Three credit hours. Non-fictional prose of the Victorian period according to the important issues of that historical era.
- 362 **VICTORIAN LITERATURE TO 1860.** Three credit hours. Poetry, non-fictional prose, and the novel of the early part of the Nineteenth Century.
- 363 **VICTORIAN LITERATURE SINCE 1860.** Three credit hours. Poetry, non-fictional prose, and the novel of the latter part of the Nineteenth Century.
- 370 **MODERN BRITISH LITERATURE.** Three credit hours. Twentieth Century British poetry, novel, and drama since 1914.
- 371 **TWENTIETH CENTURY BRITISH POETRY.** Three credit hours. Poetry from Hardy to Dylan Thomas with special emphasis on Hopkins, Yeats, Eliot, Auden, and Dylan Thomas.
- 372 **MODERN DRAMA.** Three credit hours. English and American drama. Development of the contemporary drama from Ibsen to Arthur Miller.
- 373 **CONTEMPORARY DRAMA SINCE 1950.** Three credit hours. Plays composed since 1950 with emphasis on trends in the theater of the second half of the Twentieth Century.
- 374 **MODERN NOVEL.** Three credit hours. The British novel from Conrad to the present.
- 375 **THE SHORT STORY.** Three credit hours. Study, analysis, and evaluation of short stories—American, British, Irish, and Continental—in relation to the elements of the short story and to the over-all effect.

- 380 **SURVEY OF AMERICAN LITERATURE TO 1865.** Three credit hours. A comprehensive study of American poetry and prose from the beginning until 1865, with close critical analysis given to certain works. Required of English majors.
- 381 **SURVEY OF AMERICAN LITERATURE SINCE 1865** Three credit hours. A comprehensive study of American poetry and prose from 1865 to 1960, with close critical analysis given to certain works. Required of English majors.
- 382 **AMERICAN STUDIES: LITERATURE I.** Three credit hours. Must be taken concurrently with Hs 382.
- 383 **AMERICAN STUDIES: LITERATURE II.** Three credit hours. Must be taken concurrently with Hs 383.
- 384 **THE AMERICAN NOVEL TO 1920.** Three credit hours. The development of the novel in American literature together with study of the themes and traditions specific novels represent.
- 385 **THE AMERICAN NOVEL SINCE 1920.** Three credit hours. The development of the novel in American literature from Hemingway to Bellow together with study of the themes and traditions specific novels represent.
- 387 **MODERN AMERICAN POETRY.** Three credit hours. Poetry from Whitman to Robert Lowell.
- 399 **SPECIAL STUDY.** Credit by arrangement. Directed research.

Graduate Courses

- 503 **HISTORY OF THE ENGLISH LANGUAGE.** Three credit hours. Directed research in linguistic problems arising from a study of the etymology, syntax, grammar, semantics, and phonology of the English language as it developed from c. 450 to the present day.
- 508 **MEDIEVAL LITERATURE.** Three credit hours. English literature from Anglo-Saxon times to the Fourteenth Century with special emphasis on the Pearl poet, Langland, and the mystical writers.
- 510 **CHAUCE AND HIS MILIEU.** Three credit hours. The works of Chaucer as an interpreter of his times.
- 515 **STUDIES IN THE RENAISSANCE.** Three credit hours.
- 529 **ENGLISH DRAMA TO 1642.** Three credit hours. History of English drama from the mystery plays to the closing of the theaters, exclusive of Shakespeare.
- 530 **STUDIES IN SEVENTEENTH CENTURY LITERATURE.** Three credit hours.
- 540 **STUDIES IN NEO-CLASSICAL LITERATURE.** Three credit hours.

- 542 **RESTORATION AND EIGHTEENTH CENTURY DRAMA.** Three credit hours. Drama from Dryden to Sheridan with emphasis on the heroic tragedy, comedy of manners, and sentimental comedy.
- 544 **ENGLISH NOVEL OF THE EIGHTEENTH CENTURY.** Three credit hours. Historical and critical study of the English novel from Richardson and Fielding to the Gothic novel.
- 550 **STUDIES IN ROMANTIC LITERATURE.** Three credit hours.
- 560 **STUDIES IN VICTORIAN POETS.** Three credit hours.
- 561 **STUDIES IN VICTORIAN NON-FICTIONAL PROSE.** Three credit hours.
- 564 **ENGLISH NOVEL OF THE NINETEENTH CENTURY I.** Three credit hours. The novels of Scott, Austen, Thackeray, and Eliot.
- 565 **ENGLISH NOVEL OF THE NINETEENTH CENTURY II.** Three credit hours. The novels of Dickens, Hardy, Meredith, Wilde, and James.
- 570 **STUDIES IN TWENTIETH CENTURY POETRY.** Three credit hours.
- 574 **ENGLISH NOVEL OF THE TWENTIETH CENTURY.** Three credit hours. Development of the novel from Conrad and Joyce to Waugh and Greene.
- 582 **STUDIES IN MODERN AMERICAN DRAMA.** Three credit hours. O'Neill, Miller, Williams, and Albee against the background of American theatrical development during the Twentieth Century.
- 608 **SEMINAR IN MEDIEVAL LITERATURE.** Three credit hours.
- 610 **SEMINAR IN CHAUCER.** Three credit hours.
- 615 **SEMINAR IN RENAISSANCE AUTHORS.** Three credit hours.
- 626 **SEMINAR IN SHAKESPEARE: HISTORIES AND COMEDIES.** Three credit hours. Prerequisite: En 326 or its equivalent.
- 627 **SEMINAR IN SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES.** Three credit hours. Prerequisite: En 327 or its equivalent.
- 630 **SEMINAR IN SEVENTEENTH CENTURY AUTHORS.** Three credit hours.
- 635 **SEMINAR IN MILTON.** Three credit hours.
- 640 **SEMINAR IN RESTORATION AND EIGHTEENTH CENTURY AUTHORS.** Three credit hours.
- 650 **SEMINAR IN ROMANTICISM.** Three credit hours.
- 660 **SEMINAR IN VICTORIAN AUTHORS.** Three credit hours.
- 670 **SEMINAR IN TWENTIETH CENTURY AUTHORS.** Three credit hours.
- 680 **SEMINAR IN AMERICAN AUTHORS.** Three credit hours.
- 699 **MASTER'S THESIS.** Six credit hours.

Geography (Gg)

Staff: DR. LINK.

The Department of Geography is administered by the Dean of the College of Arts and Sciences. Courses augment the student's background in economics, science, and education.

Lower Division Course

- 101 **ELEMENTS OF GEOGRAPHY.** Three credit hours.

Upper Division Courses

- 207 **WORLD GEOGRAPHY.** Three credit hours. A study of space and distance relations on the earth; the distribution of natural features, resources, population; major commodities; transportation; world trade.
- 220 **GEOGRAPHY OF EUROPE.** Three credit hours.
- 240 **ECONOMIC GEOGRAPHY.** Three credit hours. Study of world geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries. Prerequisites: Ec 100, 101. (Ec 240)
- 260 **GEOGRAPHY OF LATIN AMERICA.** Two or three credit hours.
- 375 **POLITICAL GEOGRAPHY.** Three credit hours. See Po 375.

History and Political Science

Staff: DR. SIMON, *chairman*; FR. BENNISH, MR. FORTIN, DR. GOODMAN, MR. GRUBER, MR. HEIGHBERGER, FR. JOHNSON, FR. LINK, MR. McVAY, DR. MEISTER, DR. MOULTON, FR. SHIELS.

Assisted by: MRS. BURKE, MR. DuPREE, MR. GRAHAM, MR. HEISSERER, FR. KIRK, MR. SEHER, DR. SHORT.

Graduate Fellow: MISS BERGMAN.

History (Hs)

Lower Division Courses

- 123 **EUROPE TO 1648.** Three credit hours. A broad survey of the growth of European society and culture.
- 124 **EUROPE SINCE 1648.** Three credit hours. A continuation of Hs 123.

Upper Division Courses

- 201 **CLASSICAL ARCHAEOLOGY.** Three credit hours. (C1 201, Gk 201, Lt 201)
- 202 **HISTORY OF ANCIENT GREECE.** Three credit hours. The politics and society of old Greece. (Gk 202)

- 204 **CHRISTIAN ANTIQUITY.** Three credit hours. Early Christian society through the Patristic age.
- 206 **HISTORY OF ANCIENT ROME.** Three credit hours. The making of the foremost political creation of antiquity, its spread and its dissolution. Great Roman institutions and cultural monuments. (Lt 206, C1 206)
- 207 **CONSTITUTIONAL HISTORY OF ROME.** Three credit hours. Development of the structure of law and justice. (Lt 207, Po 207)
- 211 **EARLY MIDDLE AGES, 300-1154.** Three credit hours. Social and cultural change from the Age of Constantine to the Twelfth Century Renaissance.
- 212 **THE HIGH MIDDLE AGES, 1154-1453.** Three credit hours. Social organization. Political and artistic achievements. Education. Secularism and decline.
- 215 **RENAISSANCE AND HUMANISM.** Three credit hours. Climax of the Middle Ages in fine arts, economy, and expansion of town life. Shifting patterns in government. Critical spirit and return to classical norms. Changes in education.
- 216 **RELIGIOUS UPEHAVAL IN THE 1500's.** Three credit hours. Individualism supplanting social outlook. Factors that split Christianity and divided the Medieval Republic.
- 218, 219 **HISTORY OF THE SOCIETY OF JESUS.** Three credit hours. Historical study of the spirituality, constitutions, ministries, and apostolates, in the centuries since the founding of the Society.
- 220 **EUROPE, SEVENTEENTH CENTURY.** Three credit hours. The culture and politics of the Century of Expansion.
- 221 **EUROPE, EIGHTEENTH CENTURY.** Three credit hours.
- 222 **ERA OF FRENCH REVOLUTION.** Three credit hours. Causes of modern revolutionary spirit. Philosophies and bourgeois radicals. Constitutions and oppositions. Napoleon and Pitt.
- 223 **EUROPE, 1815-1870.** Three credit hours. Europe from Napoleon to Bismarck, with special attention to the romantic movement, liberalism, conservatism, nationalism, the economic revolution, and the rise of socialism.
- 224 **EUROPE, 1870 TO THE PRESENT.** Three credit hours. Material progress and social ferment. Imperialism and alliances. The First World War and its aftermath. Totalitarian regimes and the Second World War. Postwar Europe.
- 228 **TWENTIETH CENTURY EASTERN EUROPE.** Three credit hours. Cultural and political developments following upon World War I and II.
- 230 **MODERN GERMANY.** Three credit hours. The political, economic, social, and cultural forces which have shaped modern Germany, with special attention to the strong personalities who have guided Germany's destiny, and to Germany's role in world affairs. (Po 230)

- 232 **HISTORY OF SPAIN.** Three credit hours. From the earliest times to the present. Spain is studied as the parent nation in forming America and as a vigorous protagonist in the European drama.
- 234 **HISTORY OF IMPERIAL RUSSIA.** Three credit hours. From Vladimir to Stalin. Early Byzantine contact. Mongol rule. Rise of the Romanovs. Westernization conflicting with oriental tradition. Industrial Revolution. Science and culture. Red Revolution. Present position in the world.
- 235 **SOVIET RUSSIA—TO THE PRESENT.** Three credit hours. Internal institutions of Soviet regime. Immediate background in the Nineteenth Century. The Communist Party. Apparatus of Soviet government. Impact of Marxist thought on Russian culture. (Po 235)
- 237 **MODERN FRANCE.** Three credit hours. France since the Enlightenment, with attention to its unique role in Western society. (Po 237)
- 240 **ENGLAND TO 1603.** Three credit hours. England from primitive times through Roman and medieval cultural development.
- 241 **ENGLAND, 1603 TO 1865.** Three credit hours. Struggle for constitutional government. Overseas possessions. Industrial Revolution.
- 242 **ENGLAND, 1865 TO PRESENT.** Three credit hours. Political domination of the world. Industrial Revolution. Overseas possessions. Crises born of two wars.
- 245 **THE ATLANTIC COMMUNITY: THE INTERACTION OF EUROPE AND NORTH AMERICA.** Three credit hours. Non-diplomatic relationships (political, economic, intellectual, and social) among the member communities of the North Atlantic civilization. Emphasis on the period after U.S. independence. (Po 245)
- 251 **COLONIAL HISPANIC AMERICA, 1492-1810.** Three credit hours. Organization of empire by Spain and Portugal. Cultural and economic institutions. Administration. The missions basic to the story. Trade problems. Vast expansion. Decision for independence.
- 252 **HISPANIC AMERICA SINCE 1810.** Three credit hours. Wars. Forming nations and governments. Religion vs. the State. Arts and letters. Foreign influence in economic affairs. Political thought. Making the OAS.
- 253 **HISTORY OF MEXICO.** Three credit hours. Archaeology. Fusion of Spaniard and native spirit. Missions. Viceroyalty. Independence. Administrative quandaries. Foreign relations. Losses to the United States. Juarez and Positivism. Diaz and dictatorship. Carranza, "Revolution," and peace.
- 254 **THE A.B.C. POWERS.** Three credit hours. Development of Argentina, Brazil, and Chile from the Age of Discovery to the present.
- 272 **HISTORY OF BURMA, THAILAND, VIETNAM, CAMBODIA, LAOS.** Three credit hours. From the earliest times to the present. (Po 272)
- 273 **HISTORY OF MALAYSIA, INDONESIA, PHILIPPINES.** Three credit hours. From the earliest times to the present. (Po 273)
- 278 **HISTORY OF INDIA.** Three credit hours. Indian history from the earliest times through the Indian revolt of 1857. (Po 278)
- 279 **HISTORY OF INDIA AND PAKISTAN.** Three credit hours. Indian history from 1858 to the present and history of Pakistan. (Po 279)
- 283 **HISTORY OF JAPAN.** Three credit hours. Japanese history from the earliest times through the Tokugawa Period (1867). (Po 283)
- 284 **HISTORY OF JAPAN.** Three credit hours. Japanese history from the Meiji Period (1868) to the present. (Po 284)
- 285 **HISTORY OF CHINA.** Three credit hours. Chinese history from the earliest times through the Ming Dynasty. (Po 285)
- 286 **HISTORY OF CHINA.** Three credit hours. Chinese history from the Manchu Dynasty to the present. (Po 286)
- 290 **EUROPEAN INTELLECTUAL HISTORY TO THE EIGHTEENTH CENTURY.** Three credit hours. Ideas and their influence from antiquity to the Enlightenment.
- 291 **EUROPEAN INTELLECTUAL HISTORY IN THE NINETEENTH AND TWENTIETH CENTURIES.** Three credit hours. Ideas and their influence from the French Revolution to the present.
- 292 **NATIONALISM IN MODERN TIMES.** Three credit hours. The principle of nationality and its relation to human nature and culture, biological heredity, and physical environment, followed by an exposition of the development of national consciousness and nationalist doctrines, and a survey of nationalist movements and their effects upon domestic and international politics. (Po 292)
- 294 **HISTORICAL CRITICISM.** Three credit hours. Undergraduate study of the canons of historical literature as found in its more notable productions. The problem of evidence. Truth in history. (Spring semester of senior class.)
- 295 **SENIOR SEMINAR: EUROPE.** Three credit hours.
- 296 **SENIOR SEMINAR: ASIA.** Three credit hours.
- 297 **SENIOR SEMINAR: LATIN AMERICA.** Three credit hours.
- 298 **ADVANCED READING.** Three credit hours. Tutorial course under staff direction.
- 301 **EARLY COLONIAL HISTORY, 1607-1763.** Three credit hours. England and America on the eve of colonization, the founding and development of the American colonies, with special attention to the differences in religion, culture, and politics.
- 302 **FORMATIVE YEARS OF THE REPUBLIC, 1763-1789.** Three credit hours. Thirteen colonies become a national state. Emphasis on the causes of the American Revolution and the writing of the Constitution of 1789.

- 303 **THE NEW NATION, 1785-1825.** Three credit hours. The Constitution, origins of the two-party system. Federalists and Democratic Republicans, War of 1812, and ideas which conceived the new nation.
- 304 **SECTIONALISM, 1825-1861.** Three credit hours. Development of the themes of sectionalism and attempted solutions, slavery problems leading to secession, with special attention to the Age of Jackson, constitutional discussion, rising Northern industry, growth of the West, and factors of unity and disunity.
- 310 **CIVIL WAR AND RECONSTRUCTION, 1861-1885.** Three credit hours. War. Healing wounds. Railroads and Western states. A "New South." Republican national hegemony. Higher education. Impacts of immigration and labor.
- 311 **AGE OF BIG BUSINESS, 1885-1920.** Three credit hours. Economic surge with its social and political sequel.
- 312 **UNITED STATES IN THE TWENTIETH CENTURY.** Three credit hours. The United States since 1919. Social and political tensions found in America during these years.
- 330 **HISTORY OF THE WEST TO 1789.** Three credit hours. The western movement as a mold of national character. English, French, and Spanish contributions. Peopling virgin land. Origins of American political ideas.
- 331 **HISTORY OF THE WEST SINCE 1789.** Three credit hours. A continuation of Hs 330, through the process of occupying the entire continental territory and emphasizing state-making. Cultural changes. Paternalism and hardy pioneers. Repeated frontier experiences. The Far West. The making of America.
- 341 **UNITED STATES TO 1865.** Three credit hours. Colonial base. Break from England. Confederation and Constitution. Federalists. Jeffersonian and Jacksonian democracy. The Tragic Era.
- 342 **UNITED STATES SINCE 1865.** Three credit hours. Reconstruction. Continental expansion. Rise of cities. Social questions. International influence.
- 348 **CONSTITUTIONAL HISTORY OF THE UNITED STATES TO 1865.** Three credit hours. Elements active in colonial times. Making the Constitution. Amendments and interpretations. (Po 348)
- 349 **CONSTITUTIONAL HISTORY OF THE UNITED STATES SINCE 1865.** Three credit hours. Amendments and interpretations. Changing attitudes, new conditions of life, fresh ideas. (Po 349)
- 350 **INTELLECTUAL HISTORY OF THE UNITED STATES.** Three credit hours. The roots of American thought and influences of Puritanism, political Revolutionary thought, American Renaissance, Social Darwinism, and pragmatism in American history.
- 58 **URBAN AMERICA.** Three credit hours. Emergence and importance of the city in socio-political America, particularly 1865-1915, but continuing to the 1960's. (Po 358)

- 360 **AMERICAN POLITICAL PARTIES.** Three credit hours. American political parties; their role in government and society and the contribution they have made to the development of the American system of government. Attention will be given to foreign party systems and American pressure groups. (Po 360)
- 361 **HISTORY OF AMERICAN POLITICAL INSTITUTIONS.** Three credit hours. The origin and development of the American political regime. Colonial Congresses, the Articles of Confederation, the Constitutional Convention, and the development of the legislative, executive, and judicial departments of the federal government. (Po 361)
- 364 **AFRICAN BACKGROUND OF THE AMERICAN NEGRO.** Three credit hours. The history and culture of the people of West Africa immediately preceding and at the time of the slave trade.
- 365 **THE NEGRO IN AMERICA.** Three credit hours. The interaction of the Negro and American society beginning with African background, the slave trade, slavery, Civil War and Reconstruction, Jim Crowism, Harlem Renaissance, civil rights' revolution, and Black Power. (Po 365, So 365)
- 366 **A HISTORY OF RACIAL AND ETHNIC GROUPS IN AMERICA.** Three credit hours. The major racial and ethnic groups in America and their relationship to one another. Emphasis on slavery, immigration, and the assimilation of these groups into the American character.
- 367 **A HISTORY OF RACIAL AND ETHNIC GROUPS IN AMERICA.** Three credit hours. A continuation of Hs 366.
- 371 **INTER-AMERICAN RELATIONS TO 1903.** Three credit hours. United States interests in and association with other American states, and their own inter-relations. The Monroe Doctrine. The Panama Question. (Po 371)
- 372 **INTER-AMERICAN RELATIONS SINCE 1903.** Three credit hours. Political geography changes. Unity and disunity. Interventions. International conventions. "The Good Neighbor Policy." Regional unity. (Po 372)
- 373 **UNITED STATES FOREIGN RELATIONS TO 1900.** Three credit hours. America moves toward world status in interest and influence. (Po 373)
- 374 **UNITED STATES FOREIGN RELATIONS SINCE 1900.** Three credit hours. Toward world power and worldwide responsibility. (Po 374)
- 377 **INTERNATIONAL RELATIONS.** Three credit hours. The theory of international relations. Elements of national power. Formulation and shaping of foreign policy. Diplomacy. International economics. Propaganda and ideology. Imperialism and colonialism. International organizations.
- 382 **AMERICAN STUDIES TO 1877.** Three credit hours. America from Puritan times through Reconstruction. Emphasis on the religious, political, and social influences in the formation of the American character. To be taken concurrently with En 382. History majors may take Hs 382 instead of Hs 341.
- 383 **AMERICAN STUDIES FROM 1877 TO THE PRESENT.** Three credit hours. The influence of Social Darwinism and Marxism in America and the effects of the conflict between isolationism and internationalism on the American character. To be taken concurrently with En 383. History majors may take Hs 383 instead of Hs 342.

- 395 **SENIOR SEMINAR: UNITED STATES.** Three credit hours.
- 398 **ADVANCED READING AND RESEARCH.** Three credit hours.

Graduate Courses

- 501 **HISTORICAL METHOD.** Three credit hours. Ordinarily prerequisite to and required in all cases for graduate students in history. Approach to research adapted to the Master of Arts in history and to seminar work for that degree.
- 502 **GREECE TO 480.** Three credit hours. (Gk 502)
- 503 **GREECE, THE FIFTH CENTURY.** Three credit hours. (Gk 503)
- 505 **ROMAN REPUBLIC.** Three credit hours. (Lt 505)
- 506 **EARLY ROMAN EMPIRE.** Three credit hours. (Lt 506)
- 525 **SEMINAR: EUROPE I.** Three credit hours. Research in the history of Western Europe or of Great Britain. Prerequisite: Upper division work in modern European or British history.
- 526 **SEMINAR: EUROPE II.** Three credit hours. Cf. Hs 525.
- 528 **SEMINAR: TWENTIETH CENTURY EASTERN EUROPE.** Three credit hours.
- 551 **SEMINAR: COLONIAL HISPANIC AMERICA.** Three credit hours.
- 552 **SEMINAR: REPUBLICAN HISPANIC AMERICA.** Three credit hours.
- 578 **SEMINAR: SOUTH AND SOUTHEAST ASIA.** Three credit hours.
- 583 **SEMINAR: JAPAN.** Three credit hours.
- 585 **SEMINAR: CHINA.** Three credit hours.
- 602 **SEMINAR: COLONIAL UNITED STATES.** Three credit hours.
- 603 **SEMINAR: EARLY NATIONAL PERIOD.** Three credit hours.
- 611 **SEMINAR: THE AGE OF BIG BUSINESS.** Three credit hours.
- 612 **SEMINAR: THE UNITED STATES IN THE TWENTIETH CENTURY.** Three credit hours.
- 630 **SEMINAR: THE WEST TO 1783.** Three credit hours.
- 631 **SEMINAR: THE WEST SINCE 1783.** Three credit hours.
- 648 **SEMINAR: CONSTITUTIONAL HISTORY OF THE UNITED STATES.** Three credit hours.
- 650 **SEMINAR: UNITED STATES IN THE TWENTIETH CENTURY.** Three credit hours.
- 658 **SEMINAR: URBAN AMERICA.** Three credit hours.
- 674 **SEMINAR: UNITED STATES FOREIGN RELATIONS.** Three credit hours. (Po 674)
- 699 **MASTER'S THESIS.** Six credit hours.

Political Science (Po)

Lower Division Courses

- 101 **GOVERNMENT IN SOCIETY.** Three credit hours.
- 102 **AMERICAN GOVERNMENT.** Three credit hours.
- 131 **ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY.** Three credit hours. Early theories of government; growth of kingship, parliamentary ideas, English liberties; continental tendencies; canon law; secularism. Prerequisite: Junior standing.
- 132 **MODERN POLITICAL PHILOSOPHY.** Three credit hours. Rise of absolutism; modern democratic thought; international law; force doctrines; materialistic theories; Papal pronouncements. Prerequisite: Po 131.

Upper Division Courses

- 207 **CONSTITUTIONAL HISTORY OF ROME.** Three credit hours. See Hs 207. (Lt 207)
- 221 **COMPARATIVE GOVERNMENT I.** (Britain and France) Three credit hours. An introduction to comparative government concentrating on the constitutional history of Great Britain and France. The course also deals with types of governments, parties, electoral systems, and problems of stability and democracy.
- 222 **COMPARATIVE GOVERNMENT II.** (Politics of Germany) Three credit hours. The political institutions and the constitutional development of Germany since 1918.
- 228 **TWENTIETH CENTURY EASTERN EUROPE.** Three credit hours. See Hs 228.
- 230 **MODERN GERMANY.** Three credit hours. See Hs 230.
- 235 **SOVIET RUSSIA—TO THE PRESENT.** Three credit hours. See Hs 235.
- 236 **COMMUNISM.** Nature, objectives, strategy, tactics. Three credit hours.
- 237 **MODERN FRANCE.** Three credit hours. See Hs 237.
- 245 **THE ATLANTIC COMMUNITY.** Three credit hours. See Hs 245.
- 249 **THE UNITED NATIONS.** Three credit hours. From the League of Nations to the United Nations. Purposes and principles, politics and law in the U.N. basic structure, voting procedures, and political transformations of the U.N. Major U.N. cases.
- 251 **INTERNATIONAL LAW.** Three credit hours. Origins and development. Territory and jurisdiction of States. Nationality. International claims. Diplomatic and consular officials. Treaties. Legal regulation of the use of force. International organizations.

- 272 **HISTORY OF BURMA, THAILAND, VIETNAM, CAMBODIA, LAOS.** Three credit hours. See Hs 272.
- 273 **HISTORY OF MALAYSIA, INDONESIA, PHILIPPINES.** Three credit hours. See Hs 273.
- 278 **HISTORY OF INDIA.** Three credit hours. See Hs 278.
- 279 **HISTORY OF INDIA AND PAKISTAN.** Three credit hours. See Hs 279.
- 283 **HISTORY OF JAPAN.** Three credit hours. See Hs 283.
- 284 **HISTORY OF JAPAN.** Three credit hours. See Hs 284.
- 285 **HISTORY OF CHINA.** Three credit hours. See Hs 285.
- 286 **HISTORY OF CHINA.** Three credit hours. See Hs 286.
- 292 **NATIONALISM IN MODERN TIMES.** Three credit hours.
- 298 **ADVANCED READING AND RESEARCH.** Credit arranged.
- 299 **SENIOR COMPREHENSIVE REVIEW.** Two credit hours. Required of all seniors majoring in political science.
- 330 **GOVERNMENT AND BUSINESS I.** Three credit hours. See Ec 330.
- 332 **PUBLIC ADMINISTRATION.** Three credit hours.
- 335 **PUBLIC FINANCE AND TAXATION.** Three credit hours. See Fi 335.
- 341 **THE PRESIDENCY.** Three credit hours. National Administration. Federal-State relationships. The constitutional concept of the office. The President as administrator, as commander-in-chief in wartime, as organ of foreign relations, and as political leader.
- 346 **THE CONGRESS.** Three credit hours. The American legislative process will be analyzed. The structure and functions of the United States Congress will be the main topic of the course, but U.S. State legislatures and foreign legislative systems will also be considered.
- 348 **CONSTITUTIONAL HISTORY OF U.S. TO 1865.** Three credit hours. See Hs 348.
- 349 **CONSTITUTIONAL HISTORY OF U.S. SINCE 1865.** Three credit hours. See Hs 349.
- 358 **URBAN AMERICA.** Three credit hours. See Hs 358.
- 359 **STATE AND LOCAL GOVERNMENT.** Three credit hours.
- 360 **AMERICAN POLITICAL PARTIES.** Three credit hours. See Hs 360.
- 361 **HISTORY OF AMERICAN POLITICAL INSTITUTIONS.** Three credit hours. See Hs 361.
- 362 **PUBLIC OPINION AND VOTING BEHAVIOR.** Three credit hours. How and why Americans formulate and express their political attitudes and how these attitudes are expressed in terms of political behavior, especially voting behavior. An introduction to the measurement of public opinion with an emphasis on public opinion polling.

- 365 **THE NEGRO IN AMERICA.** Three credit hours. See Hs 365.
- 370 **FOREIGN AFFAIRS IN THE UNITED STATES.** Three credit hours. Organization and operation of the State Department. The foreign service. Congress and other agencies.
- 371 **INTER-AMERICAN RELATIONS TO 1903.** Three credit hours. See Hs 371.
- 372 **INTER-AMERICAN RELATIONS SINCE 1903.** Three credit hours. See Hs 372.
- 373 **UNITED STATES FOREIGN RELATIONS TO 1900.** Three credit hours. See Hs 373.
- 374 **UNITED STATES FOREIGN RELATIONS SINCE 1900.** Three credit hours. See Hs 374.
- 375 **POLITICAL GEOGRAPHY.** Three credit hours. The geographical basis of national life. Location. Raw materials. Population. Groupings of interest. Rejection of geopolitical determinism.
- 377 **INTERNATIONAL RELATIONS.** Three credit hours. See Hs 377.
- 674 **SEMINAR: UNITED STATES FOREIGN RELATIONS.** Three credit hours. (Hs 674)
- 699 **MASTER'S THESIS.** Six credit hours.

Mathematics (Mt)

Staff: DR. LARKIN, *chairman*; MR. BRUGGEMAN, MR. CISSELL, MRS. DAVIDOFF, MR. DELANEY, MR. HONKOMP, FR. ISENECKER, DR. McNEIL, MR. NIEHAUS, MR. STRUNK, MR. TRUNNELL.

Assisted by: MR. ARMEL, MR. BESCO, MR. BROWN, MR. CHARRIER, MR. COLLINS, MR. CUMMINGS, MR. FEIGE, DR. GRACE, DR. HERBOLD, DR. JANCO, MR. KLEE, MR. LALCHANDANI, MR. LUDMAN.

Graduate Assistant: MR. THIERAUF.

Lower Division Courses

- 100 **ALGEBRA AND TRIGONOMETRY.** Three credit hours. The circular functions and applications, relation of circular functions to angles, inverse circular functions. Linear and quadratic functions, determinants, binomial theorem, mathematical induction.
- 101 **ELEMENTS OF STATISTICAL INFERENCE.** Three credit hours. Description of sample data, simple probability, theoretical distributions, normal and binomial, estimation, tests of hypotheses, correlation, and regression.

- 102 **INVESTMENT DECISION ANALYSIS.** Three credit hours. Selecting the optimum investment plan from competing alternatives. Personal and business decision-making. Time value analysis applied to stocks, bonds, insurance, and capital budgeting. Compound interest methods applied to macroeconomics. Fundamentals of programming, with computer usage to solve practical business problems.
- 110 **VECTORS AND GEOMETRY.** Three credit hours. Vector arithmetic, vector analytic geometry, conics, quadrics, polar, spherical and cylindrical coordinates, complex number arithmetic, matrices, determinants, computer orientation. Prerequisite: Equivalent of Mt 100.
- 111 **SET THEORY AND LOGIC.** Three credit hours. Introduction to systematic thinking. Includes sets, structure of statements in ordinary language, truth tables, analysis of arguments, validity vs. truth.
- 112 **COLLEGE MATHEMATICS WITH BUSINESS APPLICATIONS.** Three credit hours. Graphical analysis, functions systems of equations and matrices, inequalities maxima and minima, linear programming, series, binomial theorem, and difference equations.
- 113 **FORTRAN PROGRAMMING.** Three credit hours. Exhaustive treatment of Fortran II computer programming language. Introduction to Fortran IV.
- 120 **CALCULUS I.** Three credit hours. Rate of change of a function, derivatives of algebraic functions, curve plotting, max-min problems, integration, inverse trigonometric functions. Prerequisite: Equivalent of Mt 100.
- 121 **CALCULUS OF ONE VARIABLE (Scientific Applications).** Three credit hours. Derivatives and integrals of algebraic and other functions, parametric equations, change of coordinates and series. Applications of the calculus to problems in science. Prerequisite: Equivalent of Mt 100.
- 122 **CALCULUS OF ONE VARIABLE (Business Applications).** Three credit hours. Derivatives and integrals of algebraic and other functions used in economics. Marginal and optimality analysis and determination of elasticities. Emphasis is on applications of the calculus to problems in economics and business. Prerequisite: Equivalent of Mt 100. (Ec 122)
- 130 **CALCULUS II.** Three credit hours. Applications of integration, transcendental functions, methods of integration, elementary mechanics of series, introduction to differential equations. Prerequisite: Mt 120.
- 197 **TUTORIAL STUDY.** Credit by arrangement.

Upper Division Courses

- 201 **MATHEMATICAL STATISTICS I.** Three credit hours. Probability, probability distributions (discrete, continuous, univariate, multivariate), characteristics of distributions, sampling, estimation.
- 210 **INTRODUCTION TO INFINITE SERIES.** Three credit hours. Limit of sequence and series of real numbers, comparison, ratio and root tests, sequences and series of functions, L'Hospital's Rule, definition and properties of power series, Taylor's series, series solutions of differential equations, Fourier Series. Prerequisite: Mt 130.

- 211 **MATHEMATICAL STATISTICS II.** Three credit hours. Hypothesis testing, confidence methods, regression analysis, factorial designs, experimental design, sampling inspection, non-parametric methods. Prerequisite: Mt 201.
- 213 **COMPUTATIONAL MATHEMATICS.** Three credit hours. Computer oriented solutions of algebraic equations, matrix algebra, least squares curve fitting, numerical integration, polynomial interpolation. Prerequisite: Computer Programming.
- 220 **ADVANCED CALCULUS I.** Three credit hours. Functions of several variables, partial differentiation, exact differentials, exact differential equations, integrating factors, vector calculus, multiple integrals. Prerequisites: Mt 110, 130.
- 222 **ECONOMETRICS.** Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Mt 122. (Ec 222)
- 230 **ADVANCED CALCULUS II.** Three credit hours. Line and surface integrals, transformation of coordinates, integral theorems, hyperbolic functions, LaPlace Transforms, systems of differential equations, partial differential equations. Prerequisite: Mt 220.
- 232 **MATHEMATICS FOR ECONOMISTS.** Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Mt 122. (Ec 232)
- 236 **TOPICS IN CALCULUS AND GEOMETRY FOR TEACHERS.** Six credit hours. The rate of change of a function, derivatives of algebraic functions, plane analytic geometry, integration, vectors, and parametric equations. Credit may be applied only toward M.Ed. degree.
- 237 **TOPICS IN LOGIC AND MODERN ALGEBRA.** Six credit hours. Credit may be applied only toward M.Ed. degree.
- 238 **TOPICS IN GEOMETRY AND STATISTICS.** Six credit hours. Credit may be applied only toward M.Ed. degree.
- 240 **MATRICES AND VECTOR SPACES.** Three credit hours. Algebra of matrices, determinants, inverses, groups of transformations, vector spaces, linear and bilinear mappings, introduction to algebraic structures, and eigenvalues.
- 250 **INTRODUCTION TO MODERN ALGEBRA.** Three credit hours. Groups, isomorphism, homomorphism, rings, ideals, fields, linear congruences, real numbers. Prerequisite: Mt 240.
- 260 **ELEMENTARY TOPOLOGY.** Three credit hours. Topology of metric spaces, limits, continuity, compactness, and connectedness.
- 270 **INTERMEDIATE ANALYSIS.** Three credit hours. Elements of set theory, numerical sequences and series, continuity, differentiation. Sequences and series of functions, and Riemann-Stieltjes integral.
- 280 **INTRODUCTION TO COMPLEX VARIABLE.** Three credit hours. Complex numbers, sequences and series of numbers and functions, analytic functions, Cauchy integral theorem, power series, residues.

- 290 **SEQUENCES AND SERIES.** Three credit hours. Convergence of sequences and series of constants and functions, expansion of functions in power and Fourier series, introduction to summability.
- 302 **OPERATIONS RESEARCH.** Three credit hours. Mathematical models and associated operations research methodology. Inventory models, linear programming, queuing theory, simulation, game theory, computational methods. Prerequisite: Mt 201.
- 303 **NUMERICAL ANALYSIS I.** Three credit hours. Methods for solving mathematical problems on automatic digital computers. Interpolation, error analysis, numerical differentiation and integration, solution of linear equations, approximation of functions by polynomials. Prerequisites: Mt 240 and Computer Programming.
- 304 **PARTIAL DIFFERENTIAL EQUATIONS.** Three credit hours. First order linear and quasilinear equations, hyperbolic, elliptic, and parabolic equations, and method of characteristics.
- 310 **PROJECTIVE GEOMETRY.** Three credit hours.
- 313 **NUMERICAL ANALYSIS II.** Three credit hours. Extension of Mt 303. Solution of ordinary and partial differential equations, non-linear systems of equations, non-polynomial approximation of functions, Fourier series, computation of eigenvalues and eigenvectors of matrices. Prerequisite: Mt 303.
- 314 **ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I.** Three credit hours. Existence and uniqueness, phase-plane concepts, elementary critical points and stability theory, second order linear equations with variable coefficients, forced oscillations of linear systems, and Sturm-Liouville systems.
- 320 **MATHEMATICAL LOGIC.** Three credit hours. Model and proof theoretic investigation of the propositional and predicate calculi. Paradoxes, formal systems, Godel's theorems. Prerequisite: Mt 240.
- 324 **ORTHOGONAL FUNCTIONS.** Three credit hours.
- 330 **THEORY OF NUMBERS.** Three credit hours.
- 334 **ELLIPTIC AND HYPERBOLIC FUNCTIONS.** Three credit hours.
- 340 **SEMIGROUP THEORY.** Three credit hours. Basic topics, ideals, translational hull ideal extensions and decompositions. Prerequisite: Mt 250.
- 342 **LINEAR PROGRAMMING.** Three credit hours. The assignment problem, transportation problem, the simplex method, duality. Emphasis is on computer methods. Prerequisite: Mt 240.
- 343 **NUMERICAL LINEAR ALGEBRA.** Three credit hours. Computational methods in linear algebra. Solution of systems of linear equations. The algebraic eigenvalue problem. Analysis of errors and the machine testing of various direct and iterative methods. Prerequisites: Mt 240 and Computer Programming.
- 344 **VECTOR AND TENSOR ANALYSIS I.** Three credit hours. Fundamental operations, differentiation and integration of tensor fields, integral theorems, tensors in Cartesian orthogonal coordinates, and applications. Prerequisites: Mt 240, 270.

- 350 **FOUNDATIONS OF MATHEMATICS.** Three credit hours.
- 353 **NUMERICAL METHODS OF NON-LINEAR SYSTEMS.** Three credit hours. Extension of Mt 343 to non-linear systems. Special topics. Prerequisite: Mt 343.
- 397 **SPECIAL READING AND STUDY FOR ADVANCED STUDENTS.** Credit by arrangement.

Graduate Courses

Mt 500, 501, 502, 503, 504 are offered only in the summer. The other courses are offered in a two-year cycle in the evenings during the school year.

- 500 **TOPOLOGY.** Three credit hours.
- 501 **REAL ANALYSIS.** Three credit hours.
- 502 **THEORY OF INTEGRATION.** Three credit hours.
- 503 **COMPLEX ANALYSIS.** Three credit hours.
- 504 **MODERN ALGEBRA.** Three credit hours.
- 510 **GENERAL TOPOLOGY I.** Three credit hours. Ordinals and Cardinals, topological spaces, connectedness, separation axioms, and covering axioms.
- 520 **GENERAL TOPOLOGY II.** Three credit hours. Metric spaces, convergence, compactness, function spaces, complete spaces, homotopy.
- 530 **MEASURE THEORY AND INTEGRATION.** Three credit hours. Linear spaces, additive classes and Borel sets, outer measures, Lebesgue-Stieltjes Measure, measurable functions, integration, convergence theorems, differentiation.
- 540 **ABSTRACT ALGEBRA I.** Three credit hours. Groupoids, semigroups and groups, ring and fields, subgroups and subrings, isomorphism and imbedding, normal subgroups and ideals. Prerequisite: Mt 240.
- 550 **ABSTRACT ALGEBRA II.** Three credit hours. Universal Algebras, homomorphism, groups with multioperators, automorphisms and endomorphisms, normal and composition series, abelian, nilpotent and solvable groups. Prerequisite: Mt 540.
- 560 **REAL ANALYSIS I.** Three credit hours. Functions spaces, category, compactness and continuity, Hahn-Banach Theorem, dual space, Lebesgue measure. Prerequisites: Mt 240, 260, 270.
- 570 **REAL ANALYSIS II.** Three credit hours. Hilbert space, orthonormal sets, Mean Ergodic Theorem, Banach Algebra, Harr measure. Prerequisite: Mt 560.
580. **FUNCTIONS OF A COMPLEX VARIABLE I.** Three credit hours. Number systems, complex plane, Mobius transformations, powers and roots, holomorphic functions, and infinite series. Prerequisites: Mt 260, 270.
- 590 **FUNCTIONS OF A COMPLEX VARIABLE II.** Three credit hours. Complex integration, analytic continuation, Laurent expansion, meromorphic functions, and calculus of residues. Prerequisite: Mt 580.

- 600 **SEMINAR IN ALGEBRA.** Three credit hours.
- 602 **ADVANCED OPERATIONS RESEARCH I.** Three credit hours. Stochastic processes, queuing theory and its applications, statistical estimation of parameters. Prerequisites: Mt 201, 240.
- 604 **ADVANCED PARTIAL DIFFERENTIAL EQUATIONS.** Three credit hours. Continuation of Mt 304. Numerical methods, existence and uniqueness, transform methods, and special functions. Prerequisites: Mt 240, 280, 304.
- 611 **DESIGN OF EXPERIMENTS.** Three credit hours. Design and analysis of single-factor experiments with repeated measures on the same elements, design and analysis of factorial experiments, multifactor experiments with repeated measure on the same elements, latin squares and related designs, and analysis of covariance. Prerequisite: Mt 211.
- 612 **ADVANCED OPERATIONS RESEARCH II.** Three credit hours. Reliability models, inventory theory, game theory, and simulation techniques. Prerequisite: Mt 602.
- 614 **ADVANCED ORDINARY DIFFERENTIAL EQUATIONS II.** Three credit hours. Continuation of Mt 314. LaPlace and Fourier transform theory as applied to ordinary and partial differential equations, and engineering and physics applications. Prerequisite: Mt 280.
- 621 **APPLIED REGRESSION ANALYSIS.** Three credit hours. Fitting a straight line by least squares, the matrix approach to linear regression, the examination of residuals, two independent variables, polynomials and other models, selecting the best regression equation, multiple regression, and mathematical model building. Prerequisite: Mt 611.
- 624 **INTEGRAL EQUATIONS.** Three credit hours. Classical equations of Fredholm and Volterra; relationship to the linear differential equations initial value problem; special kernels; application to boundary value problems; and approximate methods of solution. Prerequisites: Mt 240, 270, 314.
- 631 **STOCHASTIC PROCESSES.** Three credit hours. Random variables and stochastic processes, conditional probability and conditional expectation, normal processes and covariance stationary processes, counting processes and Poisson processes, renewal counting processes, and Markov Chains. Prerequisite: Mt 211.
- 634 **CALCULUS OF VARIATIONS.** Three credit hours. Necessary and sufficient conditions for an extremum, the Euler equations, variational problems with movable boundaries, constrained extrema, Hamilton's principle, and direct methods for solving variational problems. Prerequisites: Mt 240, 270.
- 541 **STATISTICAL DECISION THEORY.** Three credit hours. Games, values and optimal strategies in games, general structure of statistical games, utility and principles of choice classes of optimal strategies, sequential games, Bayes and Minimax sequential procedures, sufficient statistics and the invariance principle in statistical games. Prerequisite: Mt 631.

- 642 **ADVANCED OPTIMIZATION TECHNIQUES I.** Three credit hours. Theory and practice in network flows, non-linear programming, gradient methods, direct search, branch and bound, integer programming, dynamic programming, decomposition methods, linear approximations to non-linear systems, and evaluation of algorithms. Prerequisite: Mt 140.
- 644 **VECTOR AND TENSOR ANALYSIS II.** Three credit hours. Tensors in general cartesian and curvilinear coordinates, extension in integral theorems, differential geometry of surfaces, and other applications. Prerequisite: Mt 344.
- 651 **SAMPLING THEORY.** Three credit hours. Basic concepts of sampling theory, simple random sampling, stratified random sampling, systematic sampling, cluster sampling, design of surveys. (BA 623)
- 652 **ADVANCED OPTIMIZATION TECHNIQUES II.** Three credit hours. Integer programming, dynamic programming, decomposition methods, linear approximations to non-linear systems, and evaluations of algorithms. Prerequisite: Mt 642.
- 697 **SPECIAL READING FOR ADVANCED GRADUATE STUDENTS.** Credit by arrangement.
- 699 **MASTER'S THESIS.** Six credit hours. Required of all students following Plan A.

Military Science (MS)

The Reserve Officers' Training Corps

Staff: COL. DOOLEY, *chairman*; LT. COL. CLARK, LT. COL. COLEMAN, LT. COL. SISAK, MAJ. DUERSON, MAJ. KIRWIN, MAJ. KOISCH, MAJ. STEWART, MAJ. TESSMER.

Assisted by: SMAJ FITCH, MSG KORMANIK, SFC ROBERSON, SSG CAMPBELL, SSG JONES, SSG ROCHELLE.

A senior unit of the Reserve Officers' Training Corps is maintained at the University by the Department of the Army.

The Department of Military Science provides an opportunity for the study of subjects of recognized military and educational value to assist the student in laying the foundations of intelligent citizenship. The primary mission is to produce junior officers who have qualities and attributes essential to their progressive and continued development as officers in the Army of the United States (United States Army Reserve), and the Regular Army.

The Army annually provides scholarships to selected students. These scholarships provide payment of tuition fees, book costs, laboratory expenses, and \$50.00 subsistence per month. The maximum term of scholarships is four years.

Students accepted for admission to the advanced corps qualify for draft exemption.

All advanced course students attending the required six weeks summer training will be paid travel allowance to and from the training installation at the rate of six cents per mile. Pay during the training period will be \$171.60 per month or approximately \$240.00 for the entire period.

All cadets not on scholarship but participating in the advanced program will receive retainer pay of \$50.00 per month for the period of enrollment.

All newly commissioned officers going on active duty will receive \$300.00 uniform allowance.

Individuals who are granted scholarships must enlist in the Enlisted Reserve Unit at Xavier and sign a formal contract agreeing to accept a commission if offered and to serve on active duty for four years.

Individuals completing the voluntary advanced program must complete the same agreements as scholarship students, except the active duty agreement is for only *two years*.

The complete program of instruction comprises four sessions of *lower division* or basic courses and four sessions of *upper division* or advanced courses.

The basic courses are designed to give the student military and citizenship training which will benefit him as an individual whether or not he enters military service.

The advanced courses qualify a limited number of selected students for commissions in the United States Army Reserve and the Regular Army. Admission to MS 201 will depend upon the fulfillment of the following conditions:

1. The filing of a formal request with the Chairman of the Military Department within the dates annually announced.
2. The completion of MS 101, 102, 103, and 104. Equivalence of basic courses completed in service (for veterans) or in some other Reserve Officers' Training Corps unit will be determined by the Chairman of the Military Department, who should be informed of the training completed, preferably in writing, thirty days prior to registration.
3. The demonstration of exceptional qualities of leadership and scholarship.
4. An agreement to complete the course and to perform six summer weeks of practical work at camp after the completion of MS 201 and 202. This work must be done under designated military supervision at a Regular Army installation.
5. Successful passing of the prescribed physical examination.
6. Attainment of a prescribed minimum score on a Department of the Army special aptitude test administered by the Department of Military Science at the University.
7. Transfer students who have not completed basic military science at their previous school, may enter the advanced course upon successful completion of the basic ROTC camp at Fort Benning, Georgia, prior to enrolling at Xavier. Admission to this camp must be coordinated by the Professor of Military Science.

Credit for ROTC will be given on the same basis as for other courses offered in the University. Where non-directed electives are required, advanced ROTC may be used to meet these requirements.

Lower Division Courses

- 101 **FIRST YEAR BASIC COURSE.** One credit hour. An introduction to military science, which includes a study of the US Defense Organization with emphasis placed on the role of the US Army in national security; leadership laboratory to include personal appearance, drill, and exercise of command.
- 102 **FIRST YEAR BASIC COURSE.** One credit hour. Discussion focuses on the organization of the US Army and ROTC; instruction and practice in marksmanship, weapons safety, and maintenance supervision; leadership laboratory, to include personal appearance, drill, and exercise of command.

- 103 **SECOND YEAR BASIC COURSE.** Two credit hours. Instruction in American military history from the Colonial Period to the present. Emphasis on an analysis of the leadership principles used by national leaders; leadership laboratory to include personal appearance, drill, and exercise of command.
- 104 **SECOND YEAR BASIC COURSE.** Two credit hours. Instruction and practical application of military geography and map and aerial photograph reading; introduction to field artillery tactics and techniques to include its mission, organization, capabilities, materiel, communications, and a survey of the organization and tactical employment of missiles; leadership laboratory to include personal appearance, drill, and exercise of command.

Upper Division Courses

- 201 **FIRST YEAR ADVANCED COURSE.** Two credit hours. The theory and application of military leadership; military teaching methods to include practical application of techniques; development of leadership potential through drill and the exercise of command. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.
- 202 **FIRST YEAR ADVANCED COURSE.** Three credit hours. Introduction to Infantry tactics; small unit tactics and communications; squad combat formations with practical exercises. Instruction in counterinsurgency, and map reading. Instruction and practice in leadership laboratory continue. Attendance at a six-week summer camp at a Regular Army establishment is normally scheduled following the First Year of Advanced ROTC training. This summer camp will normally be conducted at Indiantown Gap Military Reservation, Annville, Pennsylvania (approximately 20 miles NE of Harrisburg, Pennsylvania).
- 203 **SECOND YEAR ADVANCED COURSE.** Three credit hours. Field Artillery tactics and techniques to include: artillery survey; duties of firing battery personnel; procedures in adjusting artillery fires both as a forward observer and in the fire direction center; operation of a Field Artillery Battery and the tactical employment of artillery. Instruction and research in the role of the United States in world affairs. Leadership training through drill is continued with all students performing officer's duties at drill. Scholarships valued at \$600 for pilot training are granted to qualifying seniors in the ROTC program who volunteer and are selected by the Chairman of the Military Department for the flight training offered by the Army ROTC at a Federal Aviation Administration (FAA) approved flying school.
- 204 **SECOND YEAR ADVANCED COURSE.** Two credit hours. Continuation of instruction necessary to success as a junior officer in: military law to include Courts-Martial, pre-trial investigations, and the Articles of the Uniform Code of Military Justice; orientation on the military service to include social and official customs, retirement benefits, pay scales, and a review of the military obligations incurred by ROTC graduates. Leadership laboratory is concluded with the students' serving in positions of the more senior officers. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

Modern Languages

Staff: DR. BOURGEOIS, *chairman*; MRS. ADLER, DR. BEIGEL, DR. BURBRIDGE, MR. EICK, MR. LEONARD, MR. RIESELMAN, MRS. TROEGER, DR. VEGA.

Assisted by: MR. HOLMAN, MRS. MOLINA, MRS. NORDSIECK, MR. PLAGEMAN, MR. RENGIERING, MR. RIEDER, MR. THOM.

Students who present two or more high school units of a modern language and who pass the Proficiency Test of the Modern Language Department may complete French, German, Russian, or Spanish 101 to fulfill their modern language requirement. This test is required of all incoming freshmen.

Normally, the successful completion of ML 101 is a prerequisite for enrollment in upper division courses.

Students electing a major in a modern language are required to complete courses 201, 232, and 233 in the language.

French (Fr)

Lower Division Courses

- 100 **FRENCH I.** Five credit hours. Introduction to the French language. Designed to teach the mechanics of speaking, reading, and writing basic French.
- 101 **FRENCH II.** Five credit hours. A more advanced study of the French language. Designed to further facility in reading and conversation. Prerequisite: Fr 100 or equivalent.

Upper Division Courses

- 201 **ADVANCED ORAL AND WRITTEN COMPOSITION.** Three credit hours. Required of all majors. This requirement is waived for students who have successfully completed Fr 298.
- 205 **TEACHING MODERN LANGUAGES.** Three credit hours. See Ed 205.
- 207 **FRENCH STYLISTICS.** Three credit hours. Oral drill in advanced structural patterns, vocabulary enrichment and expansion through analysis of selected French texts. Emphasis on grammatical and syntactical difficulties. Recommended for prospective teachers and teachers-in-service.
- 208 **EXPLICATION DE TEXTE.** Three credit hours. Critical analysis of French literary texts in their linguistic, stylistic and conceptual aspects, with theory of formal oral *explication* evolving from practical exercises in the language.
- 220 **INTRODUCTION TO FRENCH CIVILIZATION.** Three credit hours. A comprehensive examination of France, its political, economic, social, and cultural institutions, together with its geography and demography. May not be elected for credit after successful completion of Fr 298.
- 232 **FRENCH LITERATURE TO LOUIS XIV.** Three credit hours. Required of all majors.
- 233 **FRENCH LITERATURE SINCE LOUIS XIV.** Three credit hours. Required of all majors.

- 240 **MEDIEVAL FRENCH LITERATURE.** Three credit hours. Lectures and discussions of such major works of Medieval French Literature as *La Chanson de Roland*, *Le Roman de Renard*, *Les Mysteres*, *Le Roman de la Rose*. Reading in modernized French.
- 242 **RENAISSANCE FRENCH LITERATURE.** Three credit hours. Renaissance and Reformation literature with emphasis on Rabelais, Montaigne, Calvin, Ronsard, Du Bellay.
- 251 **SEVENTEENTH CENTURY FRENCH CLASSICAL DRAMA.** Three credit hours. Observation, historical integration, and interpretation of representative dramas of Corneille, Moliere, and Racine.
- 253 **SEVENTEENTH CENTURY FRENCH THOUGHT.** Three credit hours. The century's philosophical, theological, and aesthetic ideas with emphasis on Descartes, Pascal, and Boileau.
- 260 **EIGHTEENTH CENTURY LITERATURE.** Three credit hours. Philosophical and literary developments of the century, with emphasis on Voltaire, the Encyclopedists, Rousseau, and Marivaux.
- 271 **NINETEENTH CENTURY FRENCH NOVEL.** Three credit hours. Prominent prose writers within the framework of romanticism, realism, and naturalism, incorporating structural and interpretive analysis of the novel form.
- 273 **NINETEENTH CENTURY FRENCH POETRY.** Three credit hours. The principal men and movements of the century, treating the poetry of romanticism, Parnassus, and symbolism.
- 275 **BALZAC.** Three credit hours. Readings and analysis of three of Balzac's masterworks. His times, life, and main philosophical and aesthetic ideas. Significance of *La Comedie Humaine*.
- 280 **TWENTIETH CENTURY FRENCH POETRY.** Three credit hours. Main trends in the poetry of the period with study and analysis of selected works by such poets as Valery, Claudel, and Saint John-Perse.
- 283 **TWENTIETH CENTURY FRENCH NOVEL.** Three credit hours. The evolution of prose fiction within this century, its main characteristics and trends, including special emphasis on the works of Proust, Gide, Mauriac, Sartre, Camus, and Robbe-Grillet.
- 285 **TWENTIETH CENTURY FRENCH DRAMA.** Three credit hours. The contemporary French theater through its main themes and practices, including plays by Claudel, Giraudoux, Anouilh, Sartre, Beckett, and Cocteau.
- 294 **SELECTED READINGS IN FRENCH.** Credit by arrangement. A program created for independent readings and individual study of specific works of French literature under the supervision of a faculty member.
- 298 **FREDIN SUMMER PROGRAM OF FRENCH STUDIES IN FRANCE.** Credit by arrangement. A special memorial program for studies in French language and civilization in French institutions of learning. Prerequisite for participation in the program is Fr 100, 101 or the equivalent. A number of partial grants-in-aid are available through the Fredin Memorial Scholarships Fund, established through the bequest of Mademoiselle Aline Fredin.

German (Gr)**Lower Division Courses**

- 100 **GERMAN I.** Five credit hours. Introduction to the German language. Designed to teach the mechanics of speaking, reading, and writing basic German.
- 101 **GERMAN II.** Five credit hours. A more advanced study of the German language. Designed to further facility in reading and conversation. Prerequisite: Gr 100 or equivalent.
- 102 **SCIENTIFIC GERMAN.** Five credit hours. Prerequisite: Gr 100.

Upper Division Courses

- 201 **ADVANCED ORAL AND WRITTEN COMPOSITION.** Three credit hours. Required of all majors.
- 205 **TEACHING MODERN LANGUAGES.** Three credit hours. See Ed 205.
- 220 **INTRODUCTION TO GERMAN CIVILIZATION.** Three credit hours. German history, politics, philosophy, literature, and art from the middle of the Eighteenth Century to the present.
- 230 **READINGS IN GERMAN LITERATURE I.** Three credit hours. Lyric and drama. German literature with readings and discussion of major works and discussion of basic literary terms.
- 231 **READINGS IN GERMAN LITERATURE II.** Three credit hours. German prose. A continuation of Gr 230.
- 232 **GERMAN LITERATURE TO 1750.** Three credit hours. German literature from the earliest time to the classical period. Lectures, discussions, and assigned readings. Required of majors.
- 233 **GERMAN LITERATURE SINCE 1750.** Three credit hours. A continuation of Gr 232. Required of majors.
- 260 **THE AGE OF GOETHE I.** Three credit hours. The Classical Period (Klopstock, Lessing, Wieland, Herder, the Young Goethe, and Schiller). Lectures and assigned readings.
- 261 **THE AGE OF GOETHE II.** Three credit hours. A continuation of Goethe and Schiller. Lectures and assigned readings.
- 265 **NINETEENTH CENTURY GERMAN LITERATURE.** Three credit hours. Lectures and readings in the development of German literature from the beginning of romanticism through the rise of naturalism.
- 266 **NINETEENTH CENTURY GERMAN LITERATURE.** Three credit hours. A continuation of Gr 265.
- 270 **THE MODERN SHORT STORY.** Three credit hours. The literary development of the period since 1880 and readings from representative authors including Arthur Schnitzler, Rainer, Maria Rilke, Paul Ernst, Thomas Mann and others.

- 271 **THE MODERN DRAMA.** Three credit hours. Principal trends in the drama since 1880 and readings from Hauptmann, Hoffmannsthal and others.
- 272 **MODERN POETRY.** Three credit hours. Representative German poets from Rilke to the present time.
- 280 **MODERN LITERATURE.** Three credit hours. Principal trends in German literature since 1880. Readings from Hauptmann, Nietzsche, Schnitzler, Mann, Kafka, and others.
- 281 **MODERN LITERATURE.** Three credit hours. A continuation of Gr 280.
- 282 **THE GERMAN HOERSPIEL.** Three credit hours. Structure and history of the radio play. Lectures and assigned readings.
- 294 **SELECTED READINGS.** Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.

Russian (Ru)**Lower Division Courses**

- 100 **RUSSIAN I.** Five credit hours. Introduction to the Russian language. Designed to teach the mechanics of speaking, reading, and writing basic Russian.
- 101 **RUSSIAN II.** Five credit hours. A more advanced study of the Russian language. Designed to further facility in reading and conversation. Prerequisite: Ru 100 or equivalent.

Spanish (Sp)**Lower Division Courses**

- 100 **SPANISH I.** Five credit hours. Introduction to the Spanish language. Designed to teach the mechanics of speaking, reading, and writing basic Spanish.
- 101 **SPANISH II.** Five credit hours. A more advanced study of the Spanish language. Designed to further facility in reading and conversation. Prerequisite: 100 or equivalent.

Upper Division Courses

- 201 **ADVANCED ORAL AND WRITTEN COMPOSITION.** Three credit hours. Required of all majors.
- 205 **TEACHING MODERN LANGUAGES.** Three credit hours. See Ed 205.
- 220 **SPANISH CIVILIZATION.** Three credit hours. The essential characteristics of Spanish civilization and its contribution to the Occidental world.
- 224 **LATIN-AMERICAN CIVILIZATION.** Three credit hours. The essential characteristics of the culture and civilization of Latin-America. Reading of essays by Marti, Montalvo, Rodo, and others.
- 232 **SPANISH AUTHORS I.** Three credit hours. Spanish literature from the beginnings to the end of the Golden Century. Selected readings. Required of all majors.

- 233 **SPANISH AUTHORS II.** Three credit hours. Spanish literature of the eighteenth, nineteenth, and twentieth centuries. A continuation of Sp 232. Required of all majors.
- 234 **LATIN-AMERICAN LITERATURE.** Three credit hours. Latin-American literature from the beginnings to the present time. Selected readings.
- 242 **EPIC POETRY.** Three credit hours. *Cantar del Mio Cid*, basic work of this genre, will be analyzed in the classroom. Other readings from the epic literature of Spain and Latin-America.
- 246 **SPANISH NOVEL OF THE RENAISSANCE.** Three credit hours. Main characteristics of the different kinds of novels of the period. Readings from *La Celestina*, *Lazarillo de Tormes*, and other important works.
- 249 **SPANISH MYSTICS.** Three credit hours. Prose and poetry of this period with emphasis upon the works of Santa Teresa de Jesus, Fray Luis de Leon, and Juan de la Cruz.
- 250 **THE NOVEL OF THE GOLDEN CENTURY.** Three credit hours. Idealism and realism. The development of the Baroque. Selected readings.
- 252 **CERVANTES.** Three credit hours. Life and works with analytical study of *Don Quixote*.
- 255 **THE DRAMA OF THE GOLDEN CENTURY.** Three credit hours. Development and characteristics. Three plays by Lope, Tirso, and Calderon.
- 257 **LOPE DE VEGA.** Three credit hours. Life and work. His lyrical poetry. Reading of representative plays.
- 259 **CALDERON.** Three credit hours. Ideas, poetry, and dramatic techniques. Reading and analysis of *La vida es sueño*. His mystery plays.
- 271 **THE PROSE OF THE NINETEENTH CENTURY.** Three credit hours. Literary movements. The *costumbrista* writers. Emphasis on Pereda and Galdos.
- 273 **THE POETRY OF THE NINETEENTH CENTURY.** Three credit hours. Foreign influences and the national tradition. Analysis of poems of Rivas, Espronceda, Becquer, Campoamor, and others.
- 275 **THE DRAMA OF THE NINETEENTH CENTURY.** Three credit hours. The main dramatists. Reading and discussion of plays by Moratin, Zorrilla, Tamayo y Baus, and Echegaray. The role of Galdos.
- 283 **THE DRAMA OF THE TWENTIETH CENTURY.** Three credit hours. Main trends and developments. The art of Benavente and Lorca. The *genero chico* and the Quintero brothers.
- 285 **"MODERNISM" AND THE GENERATION OF 1898.** Three credit hours. Parallel movements with emphasis upon Unamuno, Baroja, Ortega, Darlo, and Nervo.
- 286 **CONTEMPORARY LATIN-AMERICAN NOVEL.** Three credit hours. Development of this genre with emphasis upon Gallegos, Azuela, and Ciro Alegria.

- 289 **PRESENT-DAY LITERARY TRENDS.** Three credit hours. Various literary trends in Spain and in Latin America from the mid-20's to the present.
- 294 **SELECTED READINGS.** Credit by arrangement. A program created for independent readings and individual study of specific works of Hispanic literature under the supervision of a faculty member.

Philosophy (Pl)

Staff: FR. SCHMIDT, *chairman*; MR. ALLAIRES, DR. ASHMORE, MRS. BLAIR, FR. CURRAN, DR. DUMONT, MR. FOTINIS, DR. GENDREAU, MR. MARRERO, MR. McCABE, FR. OPPENHEIM, DR. I. SCHICK, FR. TRACY, FR. VIRAGH, FR. WUELLNER.

Assisted by: FR. FOLEY, MR. MERCURIO, MR. T. SCHICK, MR. STAUB.

Upper Division Courses

- 200 **ORIGINS OF PHILOSOPHY.** Three credit hours. The nature of philosophical inquiry; a survey of ancient philosophy; the essentials of Aristotelian logic and cosmology. Reserved to HAB students.
- 210 **LOGIC.** Three credit hours. The theory and rules of valid reasoning, chiefly deductive.
- 220 **PHILOSOPHY OF MAN.** Three credit hours. A philosophical study of man, his distinctive operations, his powers, his freedom, his nature, his complex unity; the soul and its properties; man as a person and as social. Prerequisite to all the following courses in philosophy.
230. **METAPHYSICS.** Three credit hours. A fundamental study of being as such; plurality and unity in being; change, contingency, and limitation; constituent principles, causes, and properties of being; substance and relation. Prerequisite to all the following courses in philosophy.
- 232 **PHILOSOPHY OF GOD.** Three credit hours. A philosophical inquiry by natural reason into the source of finite and contingent beings; God, His knowability, existence, nature, and attributes. Prerequisite: Pl 220, 230.
- 235 **THEORY OF KNOWLEDGE.** Three credit hours. Human knowledge from the viewpoint of its truth and certitude; error; judgment and the evidence that grounds it. Prerequisite: Pl 220, 230.
- 237 **THE MATERIAL WORLD.** Three credit hours. A philosophical analysis of material being, its constitution and its properties; change, place, space, and time; the relations of the philosophy of nature to natural science. Prerequisite: Pl 220, 230.
- 240 **PRINCIPLES OF ETHICS.** Three credit hours. A philosophical exposition of the first principles of right human action and human goodness; the purpose of human life; the human act; morality and its essential norm; the general theory of law and rights; conscience; virtue; variant ethical systems. Prerequisite: Pl 220, 230.

- 241 **CURRENT MORAL PROBLEMS.** Three credit hours. A philosophical exposition of the grounds of particular human rights and duties; the right to physical integrity (medical ethics); marriage and the family; problems relating to truth in communication; secrecy; ethics in economic life; political rights; society; community; international society; war and peace. Prerequisite: PI 240.
- 243 **PRINCIPLES OF POLITICAL PHILOSOPHY.** Three credit hours. The need for political society and its nature; its end and the means to achieve it; the role and origin of authority; the special characteristics of the state; sovereignty; relations of state and citizens; relations to other societies. Prerequisite: PI 241.
- 244 **MEDICAL ETHICS.** Three credit hours. Rights and duties of physicians; rights of patients to life, health, and integrity of body; euthanasia, mutilation, sterilization; problems of pregnancy and birth; contraception, abortion; socialized medicine; professional conduct. Prerequisite: PI 241.
- 246 **BUSINESS ETHICS.** Three credit hours. Problems of rights, justice, and law in economic life; private enterprise; competition; buying and selling, prices, wages, labor relations, unions; role of government in business. Prerequisite: PI 241.
- 250 **HISTORY OF ANCIENT PHILOSOPHY.** Three credit hours. Greek philosophy from its beginning to Neoplatonism, with special emphasis on Plato and Aristotle. Offered in the fall of even-numbered years.
- 255 **HISTORY OF ANCIENT AND MEDIEVAL PHILOSOPHY.** Three credit hours. Philosophy from its beginning to the Fourteenth Century in the West.
- 260 **HISTORY OF MEDIEVAL PHILOSOPHY.** Three credit hours. Philosophy in the West from Augustine to the Fourteenth Century, including Islamic and Jewish philosophy as they affected the West. Offered in the fall of odd-numbered years.
- 270 **HISTORY OF MODERN PHILOSOPHY.** Three credit hours. Philosophy in Europe from the Seventeenth to the Nineteenth Century, especially rationalism, empiricism, critical philosophy, and idealism. Offered in the spring semester only.
- 280 **HISTORY OF CONTEMPORARY PHILOSOPHY.** Three credit hours. The principal philosophies of the Twentieth Century, especially those currently influential in Continental Europe, Britain, and America. Offered in the fall semester only.
- 310 **SYMBOLIC LOGIC.** Three credit hours. Modern theories, procedures, and symbolic systems in logic; the calculus of propositions and of classes.
- 322 **PHILOSOPHY OF THE VIRTUES.** Three credit hours. Dispositions and habits in man; simple and complex habits; virtues and vices; the cardinal virtues.

- 324 **PHILOSOPHY OF HISTORY.** Three credit hours. The nature and sources of history; human temporality and diverse aspects of human existence; historical evidence and its types; auxiliary arts; evaluation and interpretation; interpretative theories; objectivity and certainty; types of history; uses and values of history.
- 326 **PHILOSOPHY OF ART.** Three credit hours. Artificial being and human creativity; practical knowledge and affectivity; beauty; aesthetic enjoyment; art appreciation.
- 333 **PHILOSOPHICAL ROOTS OF CONTEMPRARY ATHEISM.** Three credit hours.
- 338 **PHILOSOPHY OF SCIENCE.** Three credit hours. The nature of scientific knowledge, investigation, and theory; the relations of science and philosophy; problems for philosophy raised by science.
- 381 **CONTEMPORARY CONTINENTAL EUROPEAN PHILOSOPHY.** Three credit hours. One or more philosophies flourishing on the European Continent: phenomenology, existentialism, personalism, philosophy of spirit, logical positivism, Marxism, etc.; especially their method of philosophizing. Offered in fall semester only.
- 383 **CONTEMPORARY BRITISH AND AMERICAN PHILOSOPHY.** Three credit hours. One or more philosophies current or recently flourishing in Britain or America; linguistic analysis, logical positivism, naturalism, pragmatism, instrumentalism, new realism, etc., especially their method of philosophizing. Offered in the spring semester only.
- 388 **CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY.** Three credit hours. The response of Catholic philosophers to the impetus of existentialism, phenomenology, and linguistic analysis; varieties of Christian personalism.
- 395 **SPECIAL STUDY.** Credit to be arranged.
- 398 **SENIOR COMPREHENSIVE REVIEW 1.** No credit.
- 399 **SENIOR COMPREHENSIVE REVIEW II.** No credit.

Graduate Courses

- 523 **THE MIND-BODY PROBLEM.** Three credit hours.
- 526 **PHILOSOPHY OF AESTHETICS.** Three credit hours.
- 538 **PHILOSOPHICAL PROBLEMS IN MODERN SCIENCE.** Three credit hours.
- 548 **RECENT ETHICAL THEORIES.** Three credit hours.
- 565 **THE QUEST FOR CERTAINTY IN THE MIDDLE AGES.** Three credit hours.
- 572 **THE RATIONALISTS.** Three credit hours.
- 575 **THE BRITISH EMPIRICISTS.** Three credit hours.

- 583 **EXISTENTIALISM AND PHENOMENOLOGY.** Three credit hours.
- 586 **LINGUISTIC ANALYSIS.** Three credit hours.
- 592 **AMERICAN PRAGMATISTS.** Three credit hours.
- 652 **PLATO: MAJOR DIALOGUES.** Three credit hours.
- 655 **ARISTOTLE.** Three credit hours.
- 661 **PHILOSOPHY OF ST. AUGUSTINE.** Three credit hours.
- 663 **PHILOSOPHY OF ST. BONAVENTURE.** Three credit hours.
- 665 **PHILOSOPHY OF ST. THOMAS AQUINAS.** Three credit hours.
- 666 **WORKS OF ST. THOMAS AQUINAS.** Three credit hours.
- 671 **DESCARTES.** Three credit hours.
- 675 **HUME.** Three credit hours.
- 677 **KANT.** Three credit hours.
- 679 **HEGEL.** Three credit hours.
- 698 **SPECIAL STUDY.** Credit to be arranged.
- 699 **MASTER'S THESIS.** Six credit hours.

Physics (Ph)

Staff: MR. HART, *chairman*; DR. MILLER, *director, graduate studies*; FR. BRADLEY, MR. MARCACCIO, FR. O'BRIEN, MR. TOEPKER, FR. VOLLMAYER, DR. WERNER.

Assisted by: DR. BAHR, MR. SMITH

Graduate Assistant: MR. KUHLMAN.

Lower Division Courses

- 100, **PHYSICS OF NATURE.** Three credit hours each semester. A lecture-demonstration course covering the fifteen fundamental laws that summarize the knowledge and experience gained by past civilizations concerning our physical world. Fulfills general science requirements of core curriculum.
- 102, **ELEMENTARY ASTRONOMY.** Three credit hours each semester. A non-mathematical treatment of the basic theories of astronomy, the telescope, rocket and satellite exploration of the solar system, cosmology, stars and galaxies. Observatory and local planetarium facilities will be used. Course meets general science core requirement.

- 104, **COLLEGE PHYSICS.** Three credit hours each semester. A general physics course for pre-med, pre-dent, and other students who need a knowledge of mechanics, heat, sound, electromagnetism, optics, and modern physics. Co-requisite: Ph 105 and Ph 107 laboratory. Pre-requisite: Algebra.
- 105, **COLLEGE PHYSICS LABORATORY.** One credit hour each semester. These laboratories accompany the Ph 104 and Ph 106 lectures respectively.
- 106 **COLLEGE PHYSICS LABORATORY.** One credit hour each semester. These laboratories accompany the Ph 104 and Ph 106 lectures respectively.
- 108 **UNIVERSITY PHYSICS I.** Three credit hours. Course for Chemistry, Mathematics, and Physics majors. Mechanics, heat, sound. Co-requisite: Calculus, and Ph 109.
- 109 **UNIVERSITY PHYSICS LABORATORY.** One credit hour laboratory to accompany Ph 108.
- 110 **UNIVERSITY PHYSICS II.** Three credit hours. Continuation of Ph 108. Electromagnetism, optics, and modern physics. Co-requisite: Ph 111.
- 111 **UNIVERSITY PHYSICS LABORATORY.** One credit hour laboratory to accompany Ph 110.

Upper Division Courses

Ph 200 to 207 are not limited to, but are intended for, teachers and prospective teachers who wish to obtain a concentration in physics. Courses may be taken in any order. Prerequisite: Ph 104-106 or equivalent.

- 200 **BASIC MECHANICS.** Three credit hours. Mechanics beyond that normally covered in General Physics. Vector resolution, Newton's laws, impulse and momentum, angular momentum, harmonic motion, and conservation principles.
- 201 **BASIC OPTICS.** Three credit hours. Geometrical and physical optics with emphasis on the latter. Reflection and refraction, lenses, polarization, interference, diffraction, and line spectra.
- 202 **BASIC ELECTRICITY AND MAGNETISM.** Three credit hours. Electric fields, potential, dielectrics, capacitance, magnetic field, induced EMF, inductance, and ferromagnetism.
- 203 **PHYSICS OF THE ATOM.** Three credit hours. The principles of modern physics for people whose profession is other than that of a research physicist. Topics include relativity, quantum mechanics, atomic and nuclear physics, and the relations between these topics and modern philosophy. Since the course is as rigorous as ordinary language will allow, even the physics student can expect to obtain a more profound respect for the conciseness of mathematical equations.
- 204 **ANALOG COMPUTER WORKSHOP IN PHYSICS.** Three credit hours. Introducing a unique teaching machine—the analog computer. A survey of differential calculus, integral calculus, and some elementary differential equations as they apply to certain problems in physics. A review of electrical circuits on the level of a general physics course as the background for understanding the analog computer. Thereafter, all students will be given the opportunity to study various properties of functions by programming them on the computer.

- 205 **TIME-SHARING COMPUTER WORKSHOP.** Three credit hours. (Possible lab fee.) Uses of a new and unique learning machine are developed through working physics problems. Students learn the BASIC language, developed especially for time-sharing. Simultaneously using convenient remote teletype terminals, students converse with and program a large distant computer, each at his own personal pace. Treated are secondary school applications where joining the inquiring student with a T/S terminal engenders creative extension of the intellect.
- 206, 207 **ADVANCED STUDY OF BASIC PHYSICS I, II.** Three credit hours each semester. The broad implications of the fundamental principles of general physics. Proper pedagogical exposition of basic principles as they should be related to beginning students; hence this course should benefit current and prospective high school teachers. Prerequisite: General Physics or the equivalent.
- 230 **ELECTRICAL CIRCUITS.** Two credit hours of lecture. Direct-current circuit problems; transient and steady state solutions for some RLC circuits; series and parallel resonance, Kirchhoff's Laws in complex form; alternating current networks. Complex-number vector methods and matrices are used.
- 231 **ELECTRICAL LABORATORY.** One credit hour laboratory to accompany Ph 230.
- 242 **ELECTRONICS.** Two credit hours of lecture. Basic electronic circuits including power supplies, amplifiers, oscillators, and switching circuits, using both vacuum tubes and transistors. Impedance relations and electronic filters. Theory of electronic measurements.
- 243 **ELECTRONICS LABORATORY.** One credit hour laboratory to accompany Ph 242.
- 350 **THEORETICAL MECHANICS I.** Three credit hours. Calculus of vectors, conservative forces, nonlinear oscillator, forced oscillations with damping, electrical and acoustical analogues, planetary motion and the general laws of alpha-particle scattering, conservation of linear and angular momentum, coupled oscillators, and normal coordinates.
- 351 **MECHANICS LABORATORY.** Two credit hours. More advanced counterparts of the University physics laboratory. Analog and digital computer techniques. Experiments on ellipsoids of inertia, Kater's pendulum, gyroscopic precession and nutation, and forced harmonic oscillations.
- 352 **ELECTROMAGNETISM I.** Three credit hours. Coulomb's law, Ampere's law, Faraday's law, Maxwell's electromagnetic equations in free space and material media. Course is given in vector notation.
- 364 **PHYSICAL OPTICS.** Three credit hours. Electromagnetic wave theory is used to derive the laws of optics; reflection, refraction, diffraction, Fresnel integrals, and theory of dispersion.
- 365 **OPTICS LABORATORY.** Two credit hours. Experiments in Physical Optics, including diffraction, Michelson's interferometer, multiple beam interference, polarization, measurement of the speed of light, and various experiments on the prism spectrograph.

- 366 **ATOMIC PHYSICS.** Three credit hours. The atomic view of matter, electricity, and radiation; the atomic models of Rutherford and Bohr, relativity, X-rays, and introduction to quantum mechanics.
- 370, 371 **PHYSICAL IDEAS IN ADVANCING HUMAN THOUGHT.** One credit hour each semester. Selected ideas of Archimedes, Galileo, Newton, Einstein, and Bohr that have led to extending experience and refining thought. Lectures and seminars examine how these ideas—through the interplay of mathematics, physics, and philosophy—liberate the individual free mind for fresh exploratory adventure. Certain contemporary theoretical concepts are treated as outposts on the frontier of human knowledge. No prerequisite: open to all students regardless of class or major.
- 372 **ELECTROMAGNETISM II.** Three credit hours. Continuation of Ph 352, including Maxwell's equations, magnetic vector potential.
- 374 **NUCLEAR PHYSICS.** Three credit hours. Natural and artificial radioactivity, nuclear reactions, high-energy physics, and fundamental particles. Prerequisite: Ph 366.
- 375 **ATOMIC PHYSICS LABORATORY.** One credit hour. Photoelectric effect, Millikan oil drop experiment, e/m for electrons, black body radiation, vacuum and glass work techniques, ionization potentials, Bragg diffraction, atomic spectra.
- 376 **INTRODUCTION TO QUANTUM MECHANICS.** Three credit hours. The mathematical formalism of quantum mechanics and its physical interpretation. Wave mechanical concepts, eigenfunctions and eigenvalues, Schrodinger's equation, the hydrogen atom, matrix mechanics, perturbation theory, and collision processes. Prerequisite: Ph 366.
- 378 **SENIOR COMPREHENSIVE REVIEW.** One credit hour.
- 380 **THEORETICAL MECHANICS II.** Three credit hours. Rigid body motion, moments of inertia, principal axes, Euler's equations, rotation about fixed axis, energy equation, Lagrange's equations, Hamilton's equations, principles of least action.
- 381 **NUCLEAR PHYSICS LABORATORY.** One credit hour. Experiments in radioisotope techniques, nuclear particle counting, and instrumentation.
- 382 **THERMODYNAMICS.** Three credit hours. Thermodynamic variables and processes, internal energy of a system, first and second laws of thermodynamics, Carnot cycle, entropy and irreversibility, Gibbs's functions and Maxwell's relations, Clausius-Clapeyron and Gibbs-Helmholtz equations, van der Waals gas, phase rule, Boltzmann's distribution law, Maxwell's distribution law, Bose-Einstein statistics, Fermi-Dirac statistics.
- 384 **SENIOR COMPREHENSIVE REVIEW.** One credit hour.
- 386 **(GEOPHYSICS.) ELEMENTARY SEISMOLOGY.** Three credit hours. The nature of earthquakes, fundamental seismograph theory, and the location of earthquakes. Introduces the student to some of the basic concepts of elastic wave theory.

Graduate Courses

- 501, **CLASSICAL MECHANICS.** Three credit hours each semester. Variational principles and Lagrange's equations, the two-body central force problem, rigid body motion, Hamilton's equations, and small oscillations.
- 511, **RELATIVISTIC ELECTRODYNAMICS.** Three credit hours each semester. Relativistic Electrodynamics as an example of a theory. The nature of a theory, general principles underlying both Newtonian mechanics and special theory of relativity. The assumption of superposition, the full theory of Electrodynamics, and the Maxwell-Lorentz equations. Difficulties resulting from the fact of existence of electrons.
- 521, **QUANTUM MECHANICS.** Three credit hours each semester. Some fundamental experiments of atomic physics. DeBroglie waves and properties of wave packets. Uncertainty relation. Schroedinger's equation applied to the hydrogen atom and the harmonic oscillator. Quantum Mechanical operators in Hilbert space, matrix formulation of Q.M., perturbation theory, theory of measuring process, angular momentum and spin, Dirac's electron.
- 525 **QUANTUM BEHAVIOR OF SYSTEMS.** Three credit hours. Classical concepts demanded by the quantum theory as a rational generalization of classical physics. A contemporary approach to the quantum, based upon recent experiments such as the ESAB effect, optical pumping, and superconductivity. Subtleties of quantum wholeness, such as the Einstein-Podolsky-Rosen effect, explained through quantum behavior in the configuration space of a system. Quantum implications for the theory of knowledge, with particular emphasis on Bohr's account of his discussions with Einstein.
- 526 **SEMINAR: PHYSICAL INTERACTION.** Three credit hours. A sequel to Quantum Behavior of Systems. Further exploration into the extensive emendations of Newtonian mechanics involved in relativistic electrodynamics and quantum mechanics. The central role of interaction in questions of measurement, separability, wholeness, and extension of behavior. Reports and discussions of current investigation into nuclear, electromagnetic, Fermi, and gravitational interactions.
- 531, **PHYSICAL OPTICS.** Three credit hours each semester. Electromagnetic character of light, Maxwell's equations, coherence and interference, diffraction, polarization, amplification of light, lasers.
- 541, **ELECTRONICS FOR SCIENTISTS.** Three credit hours each semester. Lecture and laboratory course for the scientist or prospective scientist who needs a working knowledge of electronics. Analysis and design of power supplies, amplifiers, oscillators, switching circuits, and filters.
- 543, **PROCEDURES IN EXPERIMENTAL PHYSICS.** Three credit hours each semester. Lecture and laboratory course treating such topics as high vacuum techniques, laboratory glass blowing, coating of surfaces by evaporation and sputtering, light sources and detectors, charged particle detectors, and machine shop practices.
- 547 **MODERN COMPUTER WORKSHOP.** Three credit hours. Use and operation electronic analog, time sharing, and regular digital computers to solve problems in mathematics and physics.

- 549 **THEORY OF OSCILLATIONS.** Three credit hours. Forced oscillations with damping, acoustical-electrical-mechanical analogies, impedance matching, wave motion.
- 551, **ASTRONOMY.** Three credit hours each semester. Universal gravitation, the origin and evolution of the stars, the sun, the planets, nuclear processes in stars, the dynamics of the galaxy.
- 561, **INTRODUCTION TO GEOPHYSICS.** Three credit hours. Geophysical tools available for our knowledge of the earth's mantle. Seismological, thermal, gravitational, magnetic, and electrical evidence. The theories of continent building, continental drift, and sea floor spreading.
- 571, **INTRODUCTORY SOLID STATE PHYSICS.** Three credit hours each semester. Crystal structure and its measurement by X-ray techniques; crystal binding, elastic constants of crystals, thermal and dielectric properties, band structure, and applications to semi-conductors. Specific examples from recent literature will be discussed as time permits.
- 573, **METHODS OF MATHEMATICAL PHYSICS.** Three credit hours each semester. Matrix and vector algebra, complex variables, integral transforms, and linear and partial differential equations. In all cases emphasis is placed on the physical application of the theory.
- 581 **SPECIAL TOPICS: (TOPICS TO BE SPECIFIED).** Three credit hours. Special topics such as Statistical Mechanics, Nuclear Physics, Relativity, Astrophysics, and Atomic Physics.
- 595 **INDEPENDENT STUDY.** Credit by arrangement. Interdisciplinary graduate study and research. This work may call for the student to attend, from time to time and with faculty permission, classes given in various departments. This course provides explicitly for such attendance, and in regularly scheduled conferences with a faculty advisor the student reports in detail on these classes.
- 597 **SPECIAL READINGS: (AREA TO BE SPECIFIED).** One to three credit hours.
- 598 **RESEARCH IN: (AREA TO BE SPECIFIED).** One to three credit hours.
- 599 **MASTER'S THESIS.** Six credit hours.

Psychology (Ps)

Staff: DR. BIELIAUSKAS, *chairman*; DR. CERBUS, DR. CLARKE, DR. FEUSS, FR. FOLEY, DR. HELLKAMP, DR. JOHNSON, DR. KRONENBERGER, MR. LaGRANGE, DR. LIPPERT, DR. McCRYSTAL, DR. QUATMAN, DR. SCHMIDT, DR. STEVENSON, FR. TRAINOR.

Assisted by: MRS. COHEN, MR. DINERMAN, MR. FARRAR, DR. FRANKEL, SR. DONNA JUDD, MR. MILLER, DR. RICHARDSON, SR. JOHN BOSCO RYAN, MR. SETA.

Graduate Assistants: MR. BEREK, MR. HARRISON, MR. ISHAKAWA, MISS LOZANO, MR. OLIVER, MR. SANDALS.

Lower Division Courses

- 100 **EFFICIENT READING AND STUDY SKILLS.** No credit. This course is designed to evaluate the individual student's level of reading comprehension, rate of reading, and study habits and then to train him in efficient techniques and methods in these areas. The development of study and reading skills should increase the ability to interpret, analyze, and evaluate general reading material as well as enhance comprehension in specific course areas.
- 101 **GENERAL PSYCHOLOGY.** Three credit hours. Facts and principles concerning human behavior. Basic psychological processes such as sensation, perception, motivation, learning, psychological measurements, and personality development. Offered to sophomores majoring in various departments including the Department of Psychology.
- 102 **ADVANCED GENERAL PSYCHOLOGY.** Three credit hours. Especially designed for psychology majors and those interested in taking more advanced courses in psychology. Special attention given to the scientific methodology in psychology and its application to experimental studies in the areas of perception, motivation, thinking, memory, learning, and individual differences. Prerequisite: Ps 101.
- 121 **GENERAL EXPERIMENTAL PSYCHOLOGY I.** Two credit hours. Fundamental principles of behavioral science emphasizing the sensory functions, perception, learning, emotion, and motivation. This course, available to non-psychology majors wishing to fulfill their science requirement, must be taken with Ps 122. Two lectures and three hours laboratory per week.
- 122 **GENERAL EXPERIMENTAL PSYCHOLOGY I LABORATORY.** One credit hour (three laboratory hours per week). Laboratory experiments demonstrating principles described in the lectures (Ps 121). To be taken only with Ps 121.
- 123 **GENERAL EXPERIMENTAL PSYCHOLOGY II.** Lecture. Two credit hours. Behavior problems dealing with memory, language, interpersonal behavior, personality, human performance, and man-machine systems. Second half of Ps 121 offered to non-psychology majors wishing to fulfill their science requirement. To be taken only with Ps 124.
- 124 **GENERAL EXPERIMENTAL PSYCHOLOGY II LABORATORY.** One credit hour (three laboratory hours per week). Experiments demonstrating principles described in the lectures (Ps 123). To be taken only with Ps 123.
- 141 **EDUCATIONAL PSYCHOLOGY.** Three credit hours. See Ed 141.

Upper Division Courses

- 201 **HISTORY AND SYSTEMS OF PSYCHOLOGY.** Two or three credit hours. Modern scientific psychology including its various schools and their backgrounds. Reading in a broad field of psychological theory required.
- 211 **STATISTICAL TECHNIQUES.** Two or three credit hours. Basic statistics used in psychology and education, including sampling techniques, measures of central tendency, variability, and simple correlation. Two lectures and two laboratory periods per week. (Ed 211)

- 221 **EXPERIMENTAL PSYCHOLOGY I.** Three credit hours. Introduction to the aims and techniques of experimental psychology. Experiments deal with the physiological bases of behavior, the senses, and perception. One lecture and four hours laboratory per week. Prerequisites: Ps 101, 102, 211.
- 222 **EXPERIMENTAL PSYCHOLOGY II.** Three credit hours. Directed experiments on animal and human subjects, emphasizing planning, instrumentation, controls, and logical analysis of results. Experiments deal with learning, emotion, motivation, and social behavior. One lecture and four hours laboratory per week. Prerequisite: Ps 221.
- 226 **PHYSIOLOGICAL PSYCHOLOGY.** Three credit hours. Neuroanatomy and neurophysiology of the central nervous system including sensory and motor processes. The autonomic systems, their function, and their relation to emotion. Activation levels and the neuro-hormonal bases of motivation. Neural basis of conditioning and higher forms of learning. Brain disorders and their causes and treatment.
- 227 **THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Four credit hours. See Bl 340, 341.
- 231 **DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. Factors which significantly influence the life span of man from childhood to old age, with application to the stages of physiological maturation, developmental tasks, social learning, and personality integration. (Ed 231)
- 232 **CHILD PSYCHOLOGY.** Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ed 234)
- 233 **ADOLESCENT PSYCHOLOGY.** Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence. (Ed 233)
- 235 **DIFFERENTIAL PSYCHOLOGY.** Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ed 235)
- 237 **PSYCHOLOGY OF LEARNING.** Three credit hours. Experimental study of human and animal learning, including transfer, mediation, retention, verbal and concept learning. Prerequisite: Ps 101. (Ed 237)
- 239 **PSYCHOLOGY OF MOTIVATION.** Three credit hours. Theoretical and experimental approaches to the understanding of processes that determine the strength and direction of behavior. Prerequisite: Ps 301. (Ed 239)
- 251 **INDUSTRIAL PSYCHOLOGY.** Two or three credit hours. Principles of sound psychological procedure as applied to personnel in commerce and industry. Concentration upon the human element in American industry. (IR 330)
- 261 **SOCIAL PSYCHOLOGY.** Two credit hours. The individual's personality, attitudes, and behavior in multi-individual situations. (Ed 261, So 258)
- 262 **SOCIAL DYNAMICS OF COMMUNICATION.** Three credit hours. See CA 204.

- 263 **THEORIES OF PERSONALITY I.** Two credit hours. Meaning and application of different concepts in description of personality dynamics. Emotions, their expressions, their mutual interrelationships, and their meaning. Sources of personality development. (Ed 263)
- 264 **THEORIES OF PERSONALITY II.** Two credit hours. Description and evaluation of current personality theories. Continuation of Ps/Ed 263. (Ed 264)
- 266 **CRIME AND PERSONALITY.** Three credit hours. The interrelationship between personality characteristics and criminal behavior. Root causes of crime in the individual and in the culture. Consideration of personality dynamics and possible treatment approaches.
- 271 **INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 271)
- 272 **GUIDING THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 272)
- 273 **EDUCATING THE DISTURBED CHILD.** Two credit hours. (Ed 273)
- 274 **MENTAL HYGIENE.** Two credit hours. Progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ed 274)
- 275 **DYNAMIC PSYCHOLOGY.** Two credit hours. Personality concepts and methodology of various psycho-therapeutic schools. While special attention is given to Freud's contribution, other schools considered are Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered therapy. (Ed 275)
- 276 **PSYCHOLOGY OF DELINQUENCY.** Two credit hours. Types and causes of juvenile delinquency together with brief case histories. (Ed 276)
- 277 **ABNORMAL PSYCHOLOGY.** Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ed 277)
- 279 **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Two or three credit hours. See Ed 279.
- 280 **INTRODUCTION TO PROJECTIVE TECHNIQUES.** Two or three credit hours. Theory and rationale of projective techniques. Introduction to the Rorschach technique, Thematic Apperception test, Szondi Test, visual-motor tests, drawing techniques, and word association tests. Tests are described and clinical illustrations are presented with case histories.
- 281 **READINGS IN PSYCHOLOGY.** Either semester: one, two, or three credit hours. The student undertakes a library research project which he performs with the assistance of and under supervision of one staff member. He is to write a paper and pass an oral examination at the end of the semester. For seniors and graduate students only.
- 283 **PRACTICUM IN PSYCHOLOGY TESTING.** Two or three credit hours. Practical experience in administering of group tests; scoring and interpretation. Prerequisite: Ps 279 and instructor's approval. (Ed 283)

- 299 **SENIOR COMPREHENSIVE REVIEW.** Two credit hours. Required of all majors in their senior year. An original research project may be substituted for this requirement upon approval of the Chairman of the Department. Prerequisite: Senior standing and instructor's approval.

Graduate Courses

The following courses are required of all graduate students: 263, 264, 501, 502, 505.

- 501 **CONTEMPORARY THEORIES IN PSYCHOLOGY.** Three credit hours. An evaluative review of the concepts basic to current theory, research, and practice in psychology and its major divisions.
- 502 **PHILOSOPHICAL ISSUES IN PSYCHOLOGY.** Three credit hours. Historical development of basic psychological concepts from Aristotle to the present. Interrelations between science, psychology, and philosophy.
- 503 **ADVANCED EDUCATIONAL PSYCHOLOGY.** Three credit hours. See Ed 503.
- 505 **PROFESSIONAL PROBLEMS IN PSYCHOLOGY.** One credit hour. Basic principles of ethics and their application to psychological theory, research, and practice. Case studies.
- 507 **ROLE AND FUNCTION OF SCHOOL PSYCHOLOGIST.** Two credit hours.
- 511 **ADVANCED STATISTICS.** Two or three credit hours. Review of elementary correlation. Serial correlation and other correlation and methods. Use of multiple regression and discriminant analysis with psychological data. Simple analysis of variance. Basic statistical considerations in dealing with small samples. Prerequisite: Ps 211 or equivalent. (Ed 511)
- 521 **ADVANCED EXPERIMENTAL PSYCHOLOGY.** Three credit hours. Intensive survey of experimental procedures and findings; utilization of laboratory equipment; introduction to individual laboratory research.
- 530 **LEARNING AND MOTIVATION.** Three credit hours. Theories of learning, including concepts of drive, reinforcement, generalization, and discrimination, transfer of training, retention and forgetting. Prerequisites: Ps 101 and instructor's approval. (Ed 530)
- 532 **VOCATIONAL AND EDUCATIONAL GUIDANCE.** Two credit hours. See Ed 532.
- 533 **COUNSELLING PRINCIPLES AND TECHNIQUES.** Two credit hours. See Ed 533.
- 535 **OCCUPATIONAL INFORMATION AND JOB ANALYSIS.** Two credit hours. (Ed 535)
- 536 **GROUP GUIDANCE.** Two credit hours. See Ed 536.
- 538 **DESIGN OF EXPERIMENTS.** Three credit hours.
- 552 **PERSONNEL SELECTION AND EVALUATION TECHNIQUES.** Three credit hours.

- 553 **MARKETING RESEARCH.** Three credit hours. (BA 562)
- 580 **PSYCHOPATHOLOGY.** Two credit hours. (Ed 580)
- 582 **INDIVIDUAL TESTS OF INTELLIGENCE.** Two to four credit hours. See Ed 582.
- 584 **PROJECTIVE TECHNIQUES I.** Three credit hours.
- 585 **PROJECTIVE TECHNIQUES II.** Three credit hours. Prerequisite: Ps 584.
- 589 **COUNSELLING AND PSYCHOTHERAPY.** Three credit hours.
- 590 **PRACTICUM: EXPERIMENTAL PSYCHOLOGY.** Three to six credit hours.
- 591 **PRACTICUM: CLINICAL PSYCHOLOGY.** Three to six credit hours.
- 592 **PRACTICUM: COUNSELLING PSYCHOLOGY.** Three to six credit hours.
- 593 **PRACTICUM: INDUSTRIAL PSYCHOLOGY.** Three to six credit hours.
- 600-629 **WORKSHOPS AND INSTITUTES.** Titles and credit hours will be announced in each individual case.
- 645 **ADVANCED DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. (Ed 631)
- 646 **PSYCHOLOGY OF THE EXCEPTIONAL CHILD.** Two or three credit hours. (Ed 634)
- 647 **CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 647)
- 648 **PRACTICUM: TEACHING EMOTIONALLY DISTURBED CHILDREN.** (Ed 648)
- 651 **MONTESSORI EDUCATION: PHILOSOPHICAL ASPECTS.** See Ed 651.
- 652 **MONTESSORI EDUCATION: PSYCHOLOGICAL BASES.** Three credit hours. See Ed 652.
- 653 **MONTESSORI EDUCATION: DEVELOPMENTAL ASPECTS.** Three credit hours. See Ed 653.
- 670 **PSYCHOLOGY OF READING.** Two credit hours. (Ed 670)
- 671 **REMEDIAL READING.** Two or three credit hours. See Ed 671.
- 689 **RESEARCH IN PSYCHOLOGY.** Titles to be specified. Three credit hours.
- 690 **INTERNSHIP IN SCHOOL PSYCHOLOGY.** A year's course: six credit hours per semester.
- 699 **MASTER'S THESIS.** Six credit hours.

Sociology (So)

Staff: FR. McEVOY, MISS DWYER, MR. NIEHAUS, MR. RUNDLE.

The Department of Sociology is administered by the Dean of the College of Arts and Sciences.

Lower Division Courses

- 101 **INTRODUCTION TO SOCIOLOGY.** Three credit hours. The foundational postulates of a science of society; evolution of social theory; psychological, ecological, and cultural approaches to a study of man and social institutions; problems of race and population; sociological features and functions of the family; sociology of the state.

Upper Division Courses

- 201 **SOCIAL PROBLEMS.** Three credit hours.
- 218 **SOCIAL CASE WORK.** Two or three credit hours. (Ed 218)
- 219 **PROBLEMS OF MODERN STUDENTS.** Two credit hours. (Ed 219)
- 240 **URBAN PROBLEMS.** Three credit hours.
- 241 **MODERN URBAN PROBLEMS.** Three credit hours.
- 254 **MINORITY GROUPS IN SCHOOL AND COMMUNITY.** Three credit hours.
- 255 **SOCIAL CLASSES IN THE UNITED STATES.** Three credit hours.
- 257 **RACIAL-CULTURAL TENSIONS AND THE COMMUNITY.** Three credit hours.
- 258 **SOCIAL PSYCHOLOGY.** Two credit hours. See Ps 261. (Ed 261)
- 261 **SOCIETY AND RACE.** Three credit hours.
- 280 **CULTURAL ANTHROPOLOGY.** Three credit hours.
- 290 **DEVIAN'T BEHAVIOR AND CRIMINOLOGY.** Three credit hours.
- 291 **CRIMINOLOGY.** Three credit hours.
- 292 **JUVENILE DELINQUENCY.** Two or three credit hours. (Ed 292)
- 293 **JUVENILE CORRECTIONS.** Two or three credit hours. (Ed 293)
- 294 **PROBATION AND PAROLE.** Two or three credit hours. (Ed 294)
- 310 **MARRIAGE.** Two or three credit hours. See Th 310.
- 311 **THE FAMILY.** Two or three credit hours. See Th 311.
- 364 **AFRICAN BACKGROUND OF THE AMERICAN NEGRO.** See Hs 364.
- 365 **THE NEGRO IN AMERICA.** Three credit hours. See Hs 365. (Po 365)

Theology (Th)

Staff: FR. BRUEGGEMAN, *chairman*; FR. CARTER, MR. EBERHARD, FR. McEVOY, FR. McSWEENEY, FR. E. O'CONNOR, FR. QUINN, FR. SCHWIND, FR. TREACY, FR. WHEELER.

Assisted by: RABBI GOLDMAN, FR. HAUSER, FR. PETROVICH, FR. SWEENEY.

Lower Division Courses

- 101 **REVELATION AND CHRISTOLOGY.** Three credit hours. God's revelation of Himself in Scripture and in the Christ-Event, as incarnating the message of divine truth. Explanation of the Constitution on Divine Revelation of Vatican II. Man's personal response to Christ in faith, traced to its origins in history.
- 102 **CHRISTIAN LIFE WITHIN THE CHURCH.** Three credit hours. Nature of the church as the People of God. Its structured organism (Vatican II decree). Deification of the Christian and others by their share in divine life, coming to them principally through the liturgy as centered in the Eucharistic sacrifice and in the sacraments.
- 142 **CHRIST IN HIS CHURCH.** Two credit hours. Origins of the Church as seen in the Acts of the Apostles and in St. Paul's letters. Internal and external life of the Church. Role of laymen in the People of God. Hierarchical structure of the Church.
- 143 **CHRIST IN THE CHRISTIAN SOUL.** Two credit hours. The life and power of Christ as they exist in the individual lives of the members of the Mystical Body. The life of grace. Theological and moral virtues.

Upper Division Courses

- 205 **CONTEMPORARY THEOLOGY OF CREATION.** Three credit hours. Problems of evolution. Theistic evolution. Monogenism and polygenism. Theories of original sin. Christian anthropology. Evolution of man to the supernatural order.
- 206 **CONTEMPORARY THEOLOGY OF THE PEOPLE OF GOD.** Three credit hours. The Church as MYSTERY. The pilgrim Church. The Church in salvation history as studied in documents of Vatican II, and in modern theologians interpreting those decrees: Baum, Küng, etc.
- 208 **ADVANCED CHRISTOLOGY.** Three credit hours. Christ's nature and person. Historical theological developments. The human knowledge and consciousness of Christ.
- 209 **THE INCARNATION IN HUMAN LIFE.** Three credit hours. Orientation to contemporary theological-anthropological thought.
- 213 **MODERN MARIOLOGY.** Three credit hours. Modern theories of Mary's role in the church. Her "divine" prerogatives.

- 215 **THE SUPERNATURAL LIFE OF MAN.** Three credit hours. An in-depth study of the nature and process of justification. Actual grace and sanctifying grace. The INDWELLING and gifts of the Holy Spirit in the human soul.
- 216 **THE THEOLOGY OF HOPE.** Three credit hours. A modern approach to Christian eschatology. The classical theology of hope versus the contemporary approach, as in Moltmann's *The Theology of Hope*.
- 219 **CHRISTIAN ESCHATOLOGY.** Three credit hours. An in-depth consideration of man's last end, passage through death, and a re-evaluation of the meaning of the *present*. Life-after-death as an accomplishment, a total realization. The role that man's actions and attitudes play in this life as preparation for the life after death.
- 223 **SACRAMENTAL ENCOUNTER WITH CHRIST.** Three credit hours. An in-depth view of the sacraments as seen through the eyes of Vatican II.
- 224 **FUNCTION OF THE SACRAMENTS IN THE DEVELOPMENT OF THE CHRISTIAN PERSON.** Three credit hours. The basic structure of Christian sacramental living. Its connection with the mysteries of Christian priesthood and sanctifying grace. Function of the sacraments in the actual living of Christianity and in the development of the Christian person.
- 226 **POST-VATICAN II EUCHARISTIC THEOLOGY.** Three credit hours. Historical developments up to modern day. Contemporary questions. *Transfinalization. Transsignification*, etc.
- 231 **THE CHRISTIAN AND THE WORLD.** Three credit hours. Incarnational Theology. Contemporary authors of Secular Christianity. Vatican II's decree: *The Church and the Modern World*.
- 235 **FAITH AND THE MODERN PROBLEM OF GOD.** Three credit hours. Modern atheism. Radical Theology of God. "God is Dead" Theologians.
- 240 **THE THEOLOGY OF KARL RAHNER.** Three credit hours. Selections of his writings which have particular import to the church in the United States. The DIASPORA THEORY. The Church and Politics. Freedom in the Church. The FEMINIZATION of the Church. Individualism.
- 251 **BIBLICAL THEMES OF THE OLD TESTAMENT.** Three credit hours.
- 261 **THE THEOLOGY OF ST. PAUL.** Three credit hours. An introduction to the principal ideas of the Pauline Epistles, with special stress on the distinctive contribution of Paul to Christian theology.
- 262 **JOHANNINE LITERATURE.** Three credit hours. Comprehensive examination of the Fourth Gospel, of the Apocalypse, and of St. John's Epistles.
- 270 **THEOLOGY OF NEW TESTAMENT SPIRITUALITY.** Three credit hours. Biblical spirituality in general. The spirituality in the synoptic gospels of St. Paul and of St. John.
- 280 **THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE.** Three credit hours. (En 280)
- 285 **THE PSYCHOLOGY OF RELIGION.** Three credit hours.

- 300 **DYNAMICS OF CHRISTIAN EXISTENCE.** Three credit hours. Morals and Ethics. Consideration of the various modern approaches to morality. Primacy of Love, etc.
- 301 **CHRISTIAN EXISTENCE AND RELIGIOUS LIFE.** Three credit hours.
- 305 **SITUATION ETHICS: NEW MORALITY, CHRISTIAN ETHICS, AND CATHOLIC THEOLOGY.** Three credit hours.
- 310 **MARRIAGE.** Two or three credit hours. Sociological and Theological approaches. (So 310)
- 311 **THE FAMILY.** Two or three credit hours. Sociological and Theological approaches. (So 311)
- 315 **AUTHORITY IN THE MODERN CHURCH.** Three credit hours. Scriptural notion of authority and power in the New Testament. An historical study of ecclesiastical authority as it developed especially in the west.
- 320 **THEOLOGY OF THE CHRISTIAN LIFE.** Three credit hours. The Christian Life as rooted in Scripture and lived within the Church. The Theology of Grace. The Mass and the Sacraments. The Christian Virtues. Prayer and Asceticism. Apostolic Action.
- 321 **THEOLOGY OF PRESENT-DAY SPIRITUALITY.** Three credit hours. Characteristics of contemporary spirituality. Contemporary spiritual writers.
- 323 **THEOLOGY OF THE LAYMAN.** Three credit hours. The layman's priestly role in the salvation of the world. The emerging layman as seen in the various decrees of Vatican II.
- 326 **NEW LITURGICAL THEOLOGY.** Three credit hours. Constitution on the Sacred Liturgy (Vatican II). Background to reform. Liturgy and doctrine. The Liturgy and Mystery. Priesthood of the laity. Concelebration. Eschatology and the Liturgy. Liturgy and Christian Unity.
- 330 **FORM AND TECHNIQUE IN THE RELIGION CLASS.** Three credit hours.
- 331 **THEOLOGY IN THE ELEMENTARY SCHOOLS.** Three credit hours.
- 332 **THEOLOGY IN THE SECONDARY SCHOOLS.** Three credit hours.
- 333 **MORAL CATECHESIS.** Three credit hours.
- 334 **CONTEMPORARY CATECHETICAL METHODS.** Three credit hours.
- 340 **INTRODUCTION TO THE HISTORY OF RELIGIONS.** Three credit hours.
- 350 **HISTORY OF THE JEWISH PEOPLE.** Three credit hours.
- 351 **JUDAIC THOUGHT IN SCRIPTURE AND RABBINICAL SOURCES.** Three credit hours.

- 352 **CULTURE OF THE JEW FROM TALMUDIC AND POST-BIBLICAL TO MODERN TIMES.** Three credit hours.
- 353 **GREAT BOOKS OF JUDAISM.** Three credit hours.
- 354 **THE INTELLECTUAL DEVELOPMENT OF JUDAISM.** Three credit hours.
- 360 **HISTORICAL ROAD OF EASTERN ORTHODOXY.** Three credit hours.
- 361 **EASTERN ORTHODOXY, THEN AND NOW.** Three credit hours.
- 365 **REFORMATION THEOLOGY.** Three credit hours. Survey of the history of reform in the church. The factors leading to the Reformation. Comprehensive treatment of Luther and his teaching.
- 370 **PROTESTANT CHURCHES IN THE UNITED STATES.** Three credit hours. A study of doctrine, ritual, and organization of each denomination. The course is meant to be expository rather than controversial. Its purpose is to give a student a better understanding of the various Protestant sects.
- 375 **THEOLOGY AND HISTORY OF THE GENERAL COUNCILS.** Three credit hours. Contributions of the general Councils of the Church to the development of dogma. Historical circumstances affecting the course of the councils.
- 379 **CONTEMPORARY PROTESTANT THEOLOGIANS.** Three credit hours. Significant currents among leading Protestant theologians. Comparison of theology and practice in major Christian religions.
- 380 **MODERN THEOLOGY OF ECUMENISM.** Three credit hours. Development of the ecumenical movement in modern times. Vatican II and its impact on Protestant-Catholic relations.
- 385 **MODERNISM IN THE TWENTIETH CENTURY.** Three credit hours. Its growth in France, England, and Italy. Their ideas of religion, revelation, tradition, dogma, church, biblical criticism, etc. Pius X and his decrees *Lamentabili*, *Pascendi*, etc. The meaning of MODERNISM today.

Departments— The College of Business Administration

Accounting (Ac)

Staff: MR. WILZ, *chairman*; MR. BEHLER, MR. MALY, MR. SCHUTZMAN, MR. SCHWEIZER, MR. SMITH.

Assisted by: MR. BOBST, MR. DUGAN, MR. FINUCAN, MR. FLEMING, MR. GRATHWOHL, MR. GRATTON, MR. SCHAPACHER, MR. SCHLEGEL, MR. SELZER.

Lower Division Courses

- 100 **PRINCIPLES OF ACCOUNTING.** Three credit hours. Elementary principles and procedures supplemented with practical problems and practice sets.
- 101 **PRINCIPLES OF ACCOUNTING.** Three credit hours. A continuation of Ac 51 which is also prerequisite.

Upper Division Courses

- 200 **INTERMEDIATE ACCOUNTING.** Three credit hours. A broad background of theory coordinated with practical problems. Prerequisite: Ac 101.
- 201 **INTERMEDIATE ACCOUNTING.** Three credit hours. A continuation of Ac 200 which is also prerequisite.
- 210 **ADVANCED ACCOUNTING PROBLEMS.** Three credit hours. Advanced study in accounting theory and related problems applicable to partnership, special sales procedures, insurance, and fiduciaries. Prerequisite: Ac 201.
- 211 **ADVANCED ACCOUNTING PROBLEMS.** Three credit hours. A continuation of Ac 210 with emphasis on parent company, subsidiary accounting, foreign exchange, and public accounts. Prerequisite: Ac 201.
- 220 **MANAGERIAL COST ACCOUNTING.** Three credit hours. Study of elements involved in industrial production with special emphasis on costs and reports. Prerequisite: Ac 201.
- 221 **MANAGERIAL COST ACCOUNTING.** Three credit hours. A continuation of Ac 220 which is also prerequisite.
- 230 **TAXATION.** Three credit hours. Intensive study of tax laws in relation to their underlying principles. Prerequisite: Ac 101.
- 231 **ADVANCED TAXATION.** Three credit hours. Prerequisite: Ac 230.
- 240 **AUDITING PRINCIPLES.** Three credit hours. A comprehensive study of the fundamental principles of auditing. Prerequisite: Ac 221.
- 241 **ADVANCED AUDITING PRINCIPLES.** Two or three credit hours. Prerequisite: Ac 240.

- 250 **C.P.A. REVIEW.** Three credit hours. An intensive review of theory, auditing, accounting practice, and business law based on recent examinations by the state boards and prepared by the American Institute of Certified Public Accountants. Prerequisite: Courses required for a major in accounting.
- 251 **C.P.A. REVIEW.** Three credit hours. A continuation of Ac 250.
- 260 **ANALYSIS OF FINANCIAL STATEMENTS.** Three credit hours. A study of the significance, development, and technique of financial statement analyses of business enterprises. Prerequisite: Ac 101.
- 270 **CASES AND PROBLEMS IN ACCOUNTING.** Two or three credit hours. Basic principles of accounting and their application to accounting theory, research, and practice.
- 297 **TUTORIAL COURSE.** Two or three credit hours. Special reading and study for advanced students.
- 340 **DATA PROCESSING SYSTEMS.** Three credit hours. See Mg 340.
- 341 **SYSTEMS; METHODS AND PROCEDURES.** Three credit hours. See Mg 341.
- 342 **MANAGERIAL ASPECTS OF DATA PROCESSING.** Three credit hours. See Mg 342.

For graduate courses in accounting see **Business Administration: Graduate Division.**

For the M.B.A. degree with a concentration in accounting see **Graduate School: the Master of Business Administration.**

Business Administration (BA)

The following are general business service courses in Business Administration. Professors are assigned to these courses by the other departments in the College of Business Administration.

- 270 **BUSINESS STATISTICS.** Three credit hours. Techniques used in analysis. Presentation of descriptive statistics and statistical inference. Topics include frequency distributions, measures of central tendency and dispersion, elements of mathematical probability, sampling, estimation of parameters, test of hypotheses, and simple linear correlation.
- 280 **LEGAL ENVIRONMENT.** Three credit hours. To give the student a background of law, which will serve in a business environment and provide a means by which he may critically evaluate the development of the law and the purposes which the law is intended to serve.
- 281 **BUSINESS LAW I.** Three credit hours. American Business Law. Contracts: essential, form, legality, and enforcement. Property. Negotiable instruments.
- 282 **BUSINESS LAW II.** Three credit hours. Business law: Creation, powers, termination, liabilities of principal and agent. Partnerships. Corporations. Recommended prerequisite: BA 280.

- 290 **UNIFORM COMMERCIAL CODE.** Three credit hours. Designed to prepare candidates for the C.P.A. exam. The topics covered include contracts, sales, suretyship, negotiable instruments, agency, partnerships, corporations, bailments, property, insurance, bankruptcy, estates and trusts.
- 396 **BUSINESS ADMINISTRATION PROBLEMS.** Three credit hours. A case study approach. Material to afford opportunities for students to develop their analytical ability and decision-making skills and to utilize their imagination in devising feasible programs of action. Some descriptive material is presented to make case studies meaningful. Recommended only for seniors.

Graduate Courses

Students selecting courses for the degree of Master of Business Administration must include the five core courses—BA 511, 512, 513, 514, and 515—in their programs. They will include appropriate courses from the offerings for their area of concentration. As a climax to their work they will take BA 699, a seminar dealing with practical problems.

- 501 **BASIC ECONOMICS.** Four credit hours. An accelerated course in the principles of economics for MBA students without previous course work in economics.
- 502 **INTRODUCTION TO QUANTITATIVE METHODS.** Two credit hours. Mathematical concepts and techniques applied to business and economics. Topics include linear programming, flow diagrams, maxima and minima of functions, game theory, matrices, and other mathematical concepts relevant to management of economic enterprises.
- 503 **BASIC ACCOUNTING.** Four credit hours.
- 505 **BASIC MARKETING.** Two credit hours. The distribution system that operates within the environment of the United States' economy from both the institutional and functional point of view. Marketing policies within the existing governmental framework.
- 506 **BASIC STATISTICS.** Two credit hours. Techniques used in analysis. Presentation of descriptive statistics and statistical inference with emphasis on their application in the decision-making process. Topics include frequency distributions, measures of central tendency and dispersion, elements of mathematical probability, sampling, estimation of parameters, tests of hypotheses, linear correlation, and regression analysis.
- 507 **BASIC FINANCE.** Two credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing, and budgeting.
- 511 **ECONOMICS OF BUSINESS.** Three credit hours. Introduction to major areas of economics judged most useful to the business executive. Functions of the economic system; national income; business fluctuations, forecasting, government economics. Keynesian economic analysis, monetary and fiscal policies. Prerequisite: BA 501 or equivalent.
- 512 **QUANTITATIVE BUSINESS METHODS.** Three credit hours. Application of quantitative methods to the solution of recurring business problems. Basic mathematical models: breakeven, optimization, inventory, linear programming, probability, PERT, transportation, waiting line, game theory, and Markov analysis. Prerequisite: BA 502 or equivalent.

- 513 **MANAGERIAL ACCOUNTING.** Three credit hours. The contribution of accounting to efficient business administration. Basic concepts; budgeting; the operation of an accounting system; cost analysis; cost-standards; financial statements. Prerequisite: BA 503 or equivalent.
- 514 **ADMINISTRATIVE OPERATION.** Three credit hours. Techniques of planning, organizing, directing, and control in business with emphasis on the behavioral aspects. Environmental factors: dynamics of human relations, functions, and structure.
- 515 **MARKETING THEORY AND PRACTICE.** Three credit hours. The course is designed to apply marketing principles and policies. Case studies are employed to develop an understanding of the nature and scope of marketing problems and how to develop workable solutions. Prerequisite: BA 505 or equivalent.
- 519 **RESEARCH IN BUSINESS.** Three credit hours. Understanding and skills necessary to the intelligent use of research in business. In this course two credit hours are devoted to research techniques and procedures. The remaining credit hour is awarded on completion of an actual research paper. A separate grade is given for each phase of the course.
- 530 **APPLIED ECONOMIC ANALYSIS.** Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction used.
- 532 **BUSINESS FORECASTING.** Three credit hours. (Ec 532)
- 535 **GOVERNMENT REGULATION OF BUSINESS.** Three credit hours. The interaction of government and business in the United States compared with other countries. Practical problems confronting the businessman. Apparent trends in regulation. Decision-making as caused, affected, and limited by regulation.
- 538 **ECONOMICS OF LABOR.** Three credit hours. See Ec 538.
- 539 **SEMINAR: CURRENT ECONOMIC PROBLEMS.** Three credit hours. (Ec 539)
- 546 **LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY.** Three credit hours. Factors that influence the location of productive facilities, and the marketing of the finished product. Interrelationship of source of supply, location of productive facilities, and the market area. (Ec 546)
- 550 **PROBLEMS IN BUSINESS FINANCE.** Three credit hours. Principles learned in Business Finance are utilized. Financing current operations, policies, promotion, expansion, combination and selected comprehensive problems involving financial analysis and planning of capital structures. Case study method is used. Prerequisite: BA 507, 513. (Ec 550)
- 552 **INVESTMENT MANAGEMENT.** Three credit hours. Selection and management of a portfolio, based on carefully evaluated probabilities and sound techniques of security analysis. Prime emphasis is on reasoning and interpretation rather than on description. Prerequisite: BA 507 or equivalent. (Ec 552)

- 554 **BUDGETING PROCEDURES.** Three credit hours. Preparation of budgets and managerial use of business budgets. Budget allocation for sales, production, materials, labor, and overhead. Budget reports. Prerequisite: BA 513.
- 555 **CONTROLLERSHIP.** Three credit hours. The duties and responsibilities of the controller. New and advanced techniques in taxes and accounting. Prerequisite: BA 513.
- 561 **MARKETING MANAGEMENT.** Three credit hours. New developments in marketing, with a review of the position of marketing manager and its requirements. Individual reports on significant articles. Case studies employed for practical demonstration of theory application. Prior marketing courses recommended. Prerequisite: BA 515.
- 562 **MARKETING RESEARCH.** Three credit hours. Methods and techniques of marketing research; its use as a tool of management; cases in marketing research.
- 563 **INDUSTRIAL MARKETING.** Three credit hours. Problems of marketing industrial products, including the management of the marketing channels and the pricing of the products. Also covered is the area of selling and distribution of the products.
- 564 **CONSUMER BEHAVIOR THEORY.** Three credit hours. Objectives: to explore and evaluate research findings from behavioral sciences and other disciplines; to advance generalization from this evidence concerning the predictability of consumer behavior; to relate such generalizations to managerial decisions.
- 565 **ADVERTISING: THEORY AND PRACTICE.** Three credit hours. The role of advertising in the marketing process is examined for ways in which it can be profitably employed. The advertising campaign and its creative and media components are studied to develop an understanding of the decision processes involved. Case method is used. Prerequisite: BA 515.
- 600 **EXECUTIVE PRACTICES.** Three credit hours. The techniques available for handling complicated human relations situations. The discussion centers around psychological (behavioral) and sociological readings and their application to actual case situations. Prerequisite: BA 514.
- 601 **MANAGEMENT PLANNING.** Three credit hours. The planning function of management. Intermediate and long-range planning. Prerequisite: BA 514.
- 602 **MANAGEMENT INFORMATION SYSTEMS.** Three credit hours. Integration of the internal and the external environment with management; using the systems approach. The future of the systems approach as a tool for the growth of a firm.
- 603 **MATERIALS MANAGEMENT.** Three credit hours. Consideration of the materials function in an industrial organization as an integrated activity. Inventory, purchasing, and traffic operations, with a discussion of objectives and measurements. Lecture, class participation, and cases.
- 604 **PRODUCTION CONTROL.** Three credit hours. Designed to introduce students to current and advanced production and inventory control concepts and methods, emphasizing the functions that inventories serve and the pressures and costs bearing upon inventory and production decisions. Recommended prerequisite: BA 506 or equivalent.

- 605 **QUALITY CONTROL.** Three credit hours. A body of technical, analytical, and managerial knowledge. The quality function not only in a statistical context but also in its effect upon the economics of cost, organizational impact, and the engineering function. Recommended prerequisite: BA 506 or equivalent.
- 606 **SMALL BUSINESS OPERATION.** Three credit hours. Designed primarily for students who work in small businesses or own businesses. Organization, location, management, finance, production, and marketing problems are studied. Lecture and case method.
- 610 **PROBLEMS OF LABOR.** Three credit hours. An analysis of labor-management problems through the use of the "Incident Process."
- 611 **ADVANCED PERSONNEL MANAGEMENT.** Three credit hours. A case method approach to complex personnel problems at the management level.
- 612 **SEMINAR: COLLECTIVE BARGAINING.** Three credit hours. Designed to give a broad background in the historical development of collective bargaining and some of the problems that arise in the day-to-day administration of the labor-management agreement. Students will approach a particular problem in an area of their choice to develop their methodological skills in gathering, analyzing, and presenting data pertaining to it.
- 613 **PERSONNEL AND THE LAW.** Three credit hours. State and federal legislation pertaining to the employee. The historical development, current status, and economic implications of laws enacted by various levels of government to protect the worker's basic needs in our society. A seminar approach is used.
- 620 **QUANTITATIVE DECISION-MAKING.** Three credit hours. The statistical, psychological, and social aspects of managerial decision-making from a quantitative, decision-theoretic viewpoint. Strategies of decision-making, cost of information, revision of decisions in light of sample data, decision trees, theory of utility, and evaluation of competing alternatives. Prerequisite: BA 512.
- 621 **OPERATIONS RESEARCH: SIMULATION.** Three credit hours. Concepts of simulation for the manager. Techniques by which the concepts are applied in business situations. Planning computer simulation of queuing and scheduling problems, Monte Carlo simulation, and simulation languages. Prerequisites: BA 512, 620.
- 622 **OPERATION RESEARCH: OPTIMIZATION.** Three credit hours. Advanced use of quantitative techniques in making optimal business decisions. Both manual and computer techniques are developed and applied to business problems. Game theory, integer programming, dynamic programming, non-linear programming, and other advanced OR techniques. Prerequisite: BA 512.
- 623 **SAMPLING THEORY.** Three credit hours. See Mt 651
- 624 **STATISTICAL DECISION THEORY.** Three credit hours. Decision theory, covering games, values, and optimal strategies in games; general structure of statistical games; utility and principles of choice; classes of optimal strategies; sequential games; Bayes and Minimax sequential procedures, sufficient statistics, and the invariance principle in statistical games. Prerequisite: BA 512. (Mt 641)

- 690 **BUSINESS AND SOCIETY.** Three credit hours. (Ec 690)
- 695 **INDIVIDUAL READINGS AND RESEARCH.** Two or three credit hours. Open to especially qualified students with the consent of the chairman of the appropriate department.
- 699 **BUSINESS ADMINISTRATION PROBLEMS.** Three credit hours. Opportunity for the student to integrate his core and concentration background with that of other graduate students through the use of selected cases. Emphasis is placed on environment, internal management process, and performance. Prerequisites: BA 511, 512, 513, 514, and 515.

These courses in economics are also available to M.B.A. students: Ec 521: Advanced Economic Theory I; Ec 522: Advanced Economic Theory II; Ec 524: Seminar: Development of Economic Thought; Ec 542: Economic Growth and Development; Ec 544: International Economics; Ec 548: Transportation Economics.

Concentration in Hospital Administration

- 630 **HOSPITAL ORGANIZATIONAL THEORY.** Three credit hours. Medical and non-medical departments of the hospital. From a functional approach, departments are studied—their purposes, organization, relationships, and current trends. An overview of these functions as they join to provide good patient care.
- 631 **HOSPITAL SYSTEMS MANAGEMENT.** Three credit hours. The many systems within the hospital. Electronic data processing, planning and control, distribution systems, information systems, systems research and education, etc. Industrial engineering concepts.
- 632 **COMPREHENSIVE HEALTH PLANNING.** Three credit hours. Planning health care facilities on the community, state, federal, and world levels. Designed to give perspective to the various considerations and laws in health planning.
- 633 **HOSPITAL FINANCIAL MANAGEMENT.** Three credit hours. Basic managerial hospital accounting and finance. Includes a review and analysis of balance sheets, working capital requirements, credits and collections, preparation of budgets, fund raising, departmental cost accounting, third party agreements, and communication of financial information.
- 634 **HOSPITAL LEGAL ASPECTS.** Three credit hours. Various aspects of law as it relates to hospitals. Liability, contracts, torts, medical records, the law suit, consent, and other legal aspects.
- 636 **HOSPITAL PERSONNEL ADMINISTRATION.** Three credit hours. Practical personnel administration policies, procedures, and techniques as they affect hospital administration. Personnel functions; employment and records, wage and salary administration, personnel development, employee benefits and services, communications, labor relations, safety and security, and business research.
- 637 **SEMINAR: MEDICAL SERVICES ADMINISTRATION.** Three credit hours. Hospital administration problems. Health planning, the board of trustees, medical staff, administrative organization, personnel administration, financial planning, administrative operations, purchasing, public relations, patient care, establishing a new hospital or facility, and the changing environment in hospitals. Case and incident methods are used.

- 638 **COMMUNITY HEALTH PROBLEMS.** Three credit hours. Aspects of community health—health clinics, incidence of illness, control of diseases, etc. The total health environment in a community.
- 639 **MEDICAL CARE ADMINISTRATION.** Three credit hours. Cost of medical care, medical personnel, third party payers, supply and distribution of hospital beds, etc. Medical-economic considerations of health care.
- 649 **ADMINISTRATIVE RESIDENCY** (Twelve months). Nine credit hours.

Economics

The staff and the courses for the B.S.B.A. (Economics) are included with those for the A.B. (Economics) in the College of Arts and Sciences.

Finance (Fi)

Staff: DR. DONNELLY, *chairman*; DR. CLICKNER, DR. DREESE, DR. RAMINENI, MR. ROTHWELL, DR. SCHULTZ.

Assisted by: MR. FJORD, MR. JONES

Upper Division Courses

- 240 **CREDITS AND COLLECTIONS.** Three credit hours. See Mk 240.
- 250 **MONEY AND BANKING.** Three credit hours. Structure and operation of the present money and banking system; theory and history of money; credit and commercial banking; international financial relationships; Federal Reserve System. Prerequisites: Ec 100, 101. (Ec 250)
- 255 **BUSINESS FINANCE.** Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing, and budgeting. (Ec 255)
- 260 **ANALYSIS OF FINANCIAL STATEMENTS.** Three credit hours. A study of the significance, development, and technique of financial statement analyses of business enterprises. Prerequisite: Ac 100.
- 265 **INVESTMENTS.** Three credit hours. Survey of the economic bases of investment practice; techniques of security analysis and portfolio management. Prerequisites: Ec 100, 101.
- 270 **FINANCIAL INSTITUTIONS.** Three credit hours. A survey of all financial institutions including banking and monetary institutions, business finance, financial intermediaries, saving and consumer finance, and public finance and monetary policy.
- 280 **STOCK MARKETS.** Three credit hours. A study of securities, the method and manner of their exchange, the functions of security markets, and the factors promoting changes in security prices.
- 301 **FINANCIAL MANAGEMENT.** Three credit hours. A continuation of basic theory of business finance. Major problems and methods used in financing business enterprises are studied primarily from the viewpoint of business management. Prerequisite: Fi 255. (Mg 301)

- 310 **INSURANCE.** Three credit hours. The principles and practices of life and property insurance. Ways in which it may be employed in the interest of personal, family, and business welfare.
- 320 **REAL ESTATE PRINCIPLES AND FINANCE.** Three credit hours.
- 335 **PUBLIC FINANCE AND TAXATION.** Three credit hours. See Ec 335.
- 380 **CASES AND PROBLEMS IN FINANCE.** Three credit hours. A case method study of a wide variety of contemporary financial problems and business situations that usually pose debatable alternatives of action. The process of decision-making requires appropriate use of theory as well as the need for proficiency in a number of analytical techniques useful in handling the quantitative aspects of cases. Prerequisite: Fi 255. Recommended prerequisite: Fi 260.
- 385 **RESEARCH IN FINANCE.** Three credit hours. Directed study in a selected field by advanced majors in finance. Projects must have the approval of the Chairman.
- 390 **SEMINAR IN FINANCE.** Three credit hours. Management of fixed and circulating capital. Planning of short term and long term needs and sources. Lectures and case studies are used. Students in groups analyze simplified cases. Prerequisite: Fi 255.
- 397 **TUTORIAL COURSE.** Two or three credit hours. Special reading and directed study for advanced students.

Approved electives: Other courses upon consultation with, and agreement of, the Department.

Management and Industrial Relations

Staff: DR. THIERAUF, *acting chairman*; DR. BRYSKI, DR. HAYES, MR. KLEKAMP, MR. KOTZ.

Assisted by: MR. ARLINGHAUS, MR. BREYER, MR. CENTNER, DR. DONNELLY, MR. HESS, MR. GOLDMAN, MR. GROSSE, MR. KLEE, MR. O'CONNELL, DR. PETROF, DR. QUATMAN, DR. SCHULTZ, MR. SHAW, MR. SHEERAN, MR. TUDOR.

Management (Mg)

Lower Division Course

- 100 **PRINCIPLES OF MANAGEMENT.** Three credit hours. Designed to prepare students in the fundamental process which is applicable to all forms of business organization. Organizational and managerial concepts considered essential for business decision-making. Prerequisite: Ec 100, 101.

Upper Division Courses

- 204 **MARKETING MANAGEMENT.** Three credit hours. See Mk 204. Prerequisite: Mg 100.

- 210 **HUMAN RESOURCES.** Three credit hours. A survey of labor and labor law; examination of wage determinants and wage theory; examination of cause and remedies of unemployment. (IR 210, Ec 210)
- 300 **OFFICE MANAGEMENT.** Three credit hours. A study of the principles of management and their application to office management. Duties and responsibilities of the office manager. The important office management functions in today's business. The class will include lecture and case discussion. Prerequisite: Mg 100.
- 301 **FINANCIAL MANAGEMENT.** Three credit hours. A continuation of basic theory of business finance. Major problems and methods used in financing business enterprise and studied primarily from the viewpoint of business management. Prerequisites: Fi 255, Mg 100.
- 302 **PRODUCTION MANAGEMENT.** Three credit hours. Production management is the process by which resources are allocated within the firm for the creation of goods and services. Decision-making related to such resource allocation to provide students with analytical tools to optimize the results of factor allocation. Prerequisite: Mg 100.
- 310 **HUMAN RELATIONS AND MOTIVATION.** Three credit hours. Current concepts of human behavior as applied to the business organization. The disciplines of psychology and sociology are utilized to aid in establishing a basis for the analysis and solution of the human aspects of business decision. Prerequisite: Mg 100.
- 311 **RESEARCH IN MANAGEMENT.** Three credit hours. Application of research methods to selected managerial problems. Acquiring familiarity with the sources of information of value to the business manager and on the interpretation and presentation of research results. Prerequisite: Mg 100.
- 312 **CONTEMPORARY MANAGEMENT PROBLEMS.** Three credit hours. Several important problems in the area of administrative management. Specific problems vary from one semester to another. Examples of subjects to be discussed: managerial authority, business ethics, management and society, patterns of management, philosophy of management. Prerequisite: Mg 100.
- 313 **MANAGERIAL METHODS ANALYSIS.** Three credit hours. Important managerial techniques available for optimum effectiveness from the methods and procedures used in the business organization. Process charting, work and time measurement, performance rating, work sampling, and paperwork procedures. Prerequisite: Mg 100.
- 314 **MANAGERIAL POLICY FORMULATION.** Three credit hours. Cases designed to reinforce knowledge of the mechanics of the management process and the development of business policies through the study and resolution of actual management situations. Prerequisite: Mg 100.
- 320 **PERSONNEL ADMINISTRATION.** Three credit hours. Principles and practices in the administration of human relations in the industrial and commercial world. Use of scientific techniques and devices in the development of a well-rounded personnel program. (IR 320)

- 330 **INTRODUCTION TO QUANTITATIVE METHODS.** Three credit hours. Mathematical concepts and techniques applied to business and economics. Linear programming, flow diagrams, maxima and minima of functions, game theory, matrices, and other mathematical concepts relevant to management of economic enterprises.
- 331 **APPLIED QUANTITATIVE METHODS FOR BUSINESS.** Three credit hours. Application of higher mathematics to recurring business problems. Basic operations research technique is covered and applied to business problems. Prerequisite: Mt. 112, 122.
- 340 **DATA PROCESSING SYSTEMS.** Three credit hours. Principles of business data processing systems. The structure and function of key-driven, punch-card, and electronic data processing machines. Integrated electronic data processing is stressed. (Ac 340)
- 341 **SYSTEMS: METHODS AND PROCEDURES.** Three credit hours. EDP systems analysis and design. Work simplification for improved data processing methods and procedures. Prerequisite: Ac 100, 101. (Ac 341)
- 342 **MANAGERIAL ASPECTS OF DATA PROCESSING.** Three credit hours. Electronic data processing systems in business and their effect on management organization and control. The phases of planning for and evaluating the feasibility of EDP systems are also covered. Prerequisite: Mg 340 or its equivalent. (Ac 342)
- 395 **CASES AND PROBLEMS IN MANAGEMENT.** Three credit hours. Case studies of selected management problems with emphasis on the application of statistical techniques for analysis and solution.
- 397 **TUTORIAL COURSE.** Three credit hours. Research in scholarly journals on a management topic of current import. Open to students only with consent of instructor.

Approved Electives: Upon consultation with, and approval of, the Department.

Industrial Relations (IR)

Upper Division Courses

- 210 **HUMAN RESOURCES.** Three credit hours. See Mg 210. (Ec 210, Mg 210)
- 300 **LABOR RELATIONS.** Three credit hours. Issues and problems involved in union-management relations; an evaluation of collective bargaining as a method for resolving labor disputes in our economic system; case studies of labor disputes. (Ec 300)
- 310 **CURRENT LABOR PROBLEMS.** Three credit hours. Various normative and analytical frameworks for examining labor problems; application of these frameworks to several important problems facing the labor movement today. Prerequisite: IR 210. (Ec 310)
- 311 **HISTORY OF THE LABOR MOVEMENT.** Three credit hours. Workers' movements in the U.S.; comparison of characteristics of different organizations from the Colonial period to the present. (Ec 311)

- 312 **RESEARCH IN INDUSTRIAL RELATIONS.** Three credit hours. Tools essential for sound research in problems in industrial relations. Specific current problems are studied to insure competence in the use of research tools. Prerequisite: IR 210.
- 313 **LABOR LEGISLATION.** Three credit hours. The origins and development of labor law in the U.S.; emphasis on laws treating injunctions, worker combinations, labor-management relations, internal union affairs, and working conditions. (Ec 313)
- 320 **PERSONNEL ADMINISTRATION.** Three credit hours. See Mg 320.
- 330 **INDUSTRIAL PSYCHOLOGY.** Three credit hours. See Ps 251.
- 395 **CASES AND PROBLEMS IN PERSONNEL RELATIONS.** Three credit hours. Case studies in selected personnel problems with emphasis on the application of relevant behavioral science research and concepts.
- 397 **TUTORIAL COURSE.** Two or three credit hours. Contents to be determined according to the needs of the student.

Approved Electives: Upon consultation with, and approval of, the Department.

Marketing (Mk)

Staff: DR. McDAVID, *chairman*; MR. CARUSONE, MR. GROSSE, MR. JANOVIC, DR. KLINGMAN, DR. PETROF, MR. WEBB.

Assisted by: MR. FOGG, MR. McMULLIN, MR. RASMUSSEN.

Lower Division Course

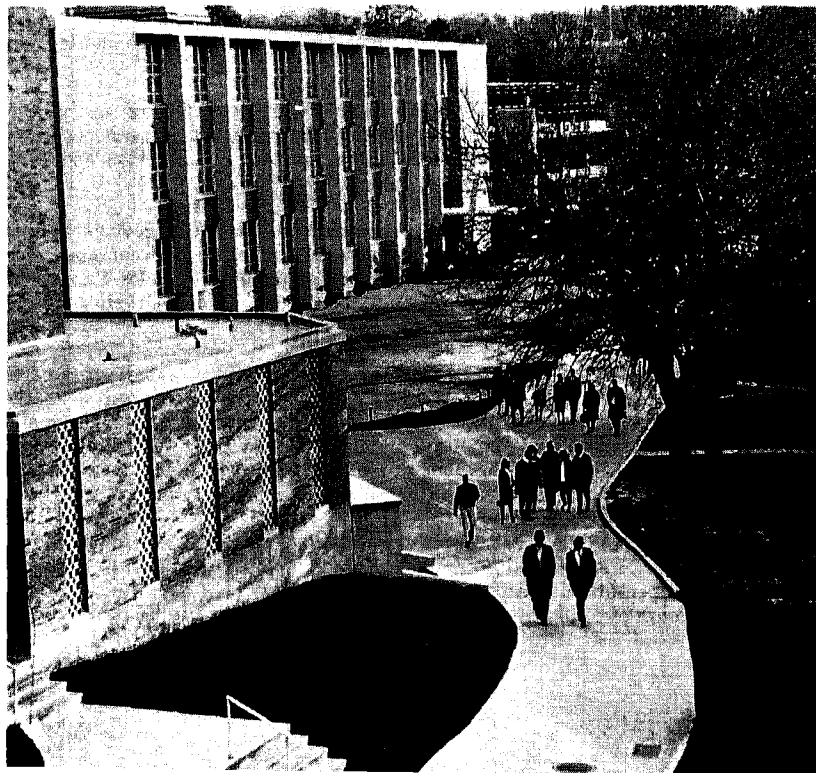
- 100 **PRINCIPLES OF MARKETING.** Three credit hours. This course contains an overview of the distribution system of the United States economy from both the institutional and functional point of view. A survey and an evaluation of current institutions for the distribution of industrial and consumer goods (wholesaling and retailing) serve as the background for the study of the functions in distribution such as selling (advertising, personal sales, and sales promotion), buying, storage, transportation, and marketing information. Marketing policies are discussed within the existing governmental framework.

Upper Division Courses

- 201 **MARKETING POLICY.** Three credit hours. This course increases the problem-solving ability of students by requiring their continuous participation in a series of case-studies. These deal with marketing strategy and policy, and problems will be examined, analyzed, and discussed in depth. The effects of the proposed marketing actions will be projected from the viewpoint of management. Mk 201 is a prerequisite for other upper division courses.
- 202 **MARKETING RESEARCH.** Three credit hours. The place of marketing research as a major management tool will be examined. Applications of marketing research will be discussed: determination of the needs of consumers and of marketing intermediaries; measurement of potential markets; sales forecasting; effectiveness of advertising; use of motivation research. Special attention will be given to test-marketing and the use of panels. Prerequisite: BA 270.

- 204 **MARKETING MANAGEMENT.** Three credit hours. The need for marketing planning. Changes in the economy over a period of time. The need for new products to replace existing products for new marketing techniques. The management of personal selling. The co-ordination of advertising with all other aspects of marketing. The development of policy toward changing the items comprising the present product-lines. Prerequisite: Nine hours of upper division courses in Marketing. (Mg 204)
- 210 **INDUSTRIAL MARKETING.** Three credit hours. The special problems of marketing industrial products. Marketing planning as a management function. Management of the marketing channels. Pricing of industrial products. Getting the industrial products sold. Efficient physical distribution of industrial products. Customer services.
- 212 **PURCHASING.** Three credit hours. Grounding in the principles and practices of purchasing. Emphasis is placed on the techniques involved in making decisions on the right quality and quantity at the right prices, price policies, sources of supplies, and standards of performance.
- 220 **INTERNATIONAL MARKETING.** Three credit hours. Conditions peculiar to international distribution of United States goods and services and the effects of this distribution on the national welfare are the bases for the study of international marketing organizations and methods. Technical and financial complexities, such as pricing, foreign collections, foreign exchange, and international banking facilities, are explained.
- 230 **RETAILING MANAGEMENT.** Three credit hours. Fundamental principles and policy considerations for the successful management of modern-day retailing organizations. It develops analytical skills and problem-solving ability applied to the planning, organizing, and controlling of retail establishments. Emphasis is placed on aspects of retailing geography, merchandising, and pricing.
- 240 **CREDITS AND COLLECTIONS.** Three credit hours. Nature, instruments, and place of credit in the economy. Management of consumer, mercantile, and bank credit. Analysis of credit risk. Management of collection and credit control. (Ec 240)
- 241 **MARKETING MANAGEMENT.** Three credit hours. Advanced study of new developments in marketing, with a review of the position of marketing manager and its requirements. Individual reports on significant articles. Case studies employed for practical demonstration of theory. Prior marketing courses recommended.
- 250 **ADVERTISING MANAGEMENT.** Three credit hours. A study of the creative and institutional aspects of advertising and their relationship to market and product attributes provides the framework for successful management of advertising campaigns. Emphasis on creative strategy, media strategy, and evaluation strategy as these relate to planning, organizing, and controlling the advertising effort. The effects of legal and social environment are analyzed.
- 260 **SALES MANAGEMENT.** Three credit hours. The role of personal selling in marketing. The selection, training, and assignment of the sales force. Motivation, compensation, and promotion of it. Advantages and disadvantages of the commission plan of compensation. Continuous training of the sales force.

- 262 **SALESMANSHIP.** Two or three credit hours. The stress is on the understanding of selling—analyzing the dynamics of a sale. It offers the student an opportunity to understand the function of persuasive leadership as it relates to commerce and to other business relationships. The techniques of persuasive leadership as it applies to the buying of goods and services are studied and practiced.
- 270 **UNDERSTANDING THE CONSUMER.** Three credit hours. Understanding consumer behavior by drawing on available knowledge from various disciplines such as anthropology, economics, psychology, sociology, etc. Relating such knowledge to the decision-making process of a business firm.
- 280 **PHYSICAL DISTRIBUTION ANALYSIS.** Three credit hours. The logistics problems of the firm will be examined as a part of the overall distribution process. Emphasis will be on an evaluation of the physical movement functions of marketing, such as transportation, storage, and optimum allocation of products to various geographical locations. The quantitative approach is stressed and inventory control, product flow, and plant location factors are all analyzed.
- 290 **CASES AND PROBLEMS IN MARKETING.** Three credit hours. In-depth study and discussion of contemporary marketing developments. Subjects will vary from semester to semester in order to advance the knowledge of the marketing student in specialized marketing areas. Prerequisite: Nine hours of upper division marketing courses.
- 295 **TUTORIAL COURSE.** Two or three credit hours. Research, meetings, and attendance at scheduled lectures as determined by the advisor. Prerequisite: Permission of the chairman.



The Graduate School

Administrative Officers

RAYMOND F. McCOY, Ed.D.
Dean

THOMAS H. HANNA, Ed.D.
Assistant Dean

THOMAS J. HAILSTONES, Ph.D.
Director, Master of Business Administration Program; Dean, College of Business Administration

JAMES GAFFNEY, M.Ed.
Assistant to the Dean

W. JACK GROSSE, M.B.A., J.D.
Assistant to the Dean

The Graduate Council

RAYMOND F. McCOY, Ed.D.
(Chairman) Dean, Graduate School; Chairman, Department of Education

VYTAUTAS J. BIELIAUSKAS, Ph.D.
Chairman, Department of Psychology

LAWRENCE I. DONNELLY, Ph.D.
Chairman, Department of Economics

THOMAS J. HAILSTONES, Ph.D.
Director, Master of Business Administration Program; Dean, College of Business Administration

PAUL W. HARKINS, Ph.D., LL.D.
Chairman, Department of Classical Languages

JOHN B. HART, M.S.
Chairman, Department of Physics

ROBERT G. JOHNSON, Ph.D.
Chairman, Department of Chemistry

REV. ROBERT W. SCHMIDT, S.J., Ph.D.
Chairman, Department of Philosophy

WILLIAM J. LARKIN III, Ph.D.
Chairman, Department of Mathematics

REV. THOMAS G. SAVAGE, S.J., M.A. (Oxon.)
Chairman, Department of English

PAUL L. SIMON, Ph.D.
Chairman, Department of History

Admission and Probation Committee

The Committee consists of the Chairman of the Department which the student seeks to enter, the Dean of the Graduate School, and the Assistant Dean.

Scope and General Requirements

The Graduate School opened in 1946 under the direction of its present Dean. Its first graduate degrees were awarded in 1947. In 1952 the Master of Business Administration program was added. These degree programs are offered: the Master of Arts in economics, English, history-political science, psychology, and, in summers only, classics and philosophy; the Master of Science in chemistry, mathematics, and physics; the Master of Education; the Master of Business Administration; and the Master of Business Administration (Hospital Administration).

The Graduate Council encourages the registration of *special* students as well as of *degree* students. With the approval of the chairman of the concerned department, special students register for courses which they desire to pursue with profit but without regard for degree requirements. Degree students register with the express intention of following a degree program.

The Graduate School has always been coeducational.

Academic Calendar

The Graduate School Academic Calendar is integrated with the total University Calendar, which may be found at the front of this Catalogue.

Admission

Application for admission to graduate studies is made in form. Application forms can be had on request. Applications should be followed promptly by a transcript of applicant's credits.

Students electing graduate work leading to a master's degree must present evidence of having a bachelor's degree from an accredited institution, and also present official transcripts of his record from each college in which credit was obtained. Others will be registered conditionally.

An applicant with a bachelor's degree from a non-accredited institution is not admitted to full graduate standing until he has successfully completed at least six hours of graduate work with the required grades, and has been accepted by the department which controls his program.

Since graduate work is work done under direction, the chairman of the department of the student's major subject must decide on the student's preparation for graduate study in that department; and the chairman or one appointed by him will be the student's advisor throughout. The general prerequisites for graduate work in any department must be the equivalent of an undergraduate major at Xavier University.

Seniors of satisfactory academic standing who are within nine hours of completing their undergraduate requirements for the bachelor's degree may, in their last semester, register for graduate work.

Miller Analogies Test

All applicants for admission to the Graduate School will be required to take the Miller Analogies Test at Xavier University, or to bring with them an official report of their scores. Scores will aid the faculty in the guidance of the student.

Candidacy

Candidacy shall begin when, after the student's completion of six hours of graduate work, his application shall have been passed by the Graduate Council. Every student must make such application after completing six hours of work at Xavier. Those thought unfit will be advised to discontinue their course.

No more than five years may elapse between candidacy and completion of work for the degree.

A student who attends only summer sessions may be granted a graduate degree provided he is engaged in work related to his major subject.

Requirements

A minimum of thirty semester hours of graduate work is demanded for the Master's degree. The M.A. (Psychology) and the M.B.A. (Hospital Administration) require thirty-six hours.

Specific requirements of the Masters' programs are presented later in this section.

Distribution of the course requirements must be approved by the chairman of the department of the major subject. At least one-half of the courses must be in that department. Candidates, however, for the Master of Arts and Master of Science degrees are advised to take all their work in their major department.

Character of the courses required is subject to the decision of the advisor. At least one-half of the hours of credit in the major subject and one-half the total number of hours toward the degree must be obtained in courses numbered 500 to 699, distinctly graduate courses.

Course Numbers

This is the new system of numbering courses:

- 100 to 199 Lower division courses
- 200 to 399 Upper division and graduate courses
- 400 to 499 Administrative use only
- 500 to 699 Courses for graduate students only

Examinations

Candidates for graduate degrees shall be required to pass a final comprehensive examination, oral or written. This examination is oral in all programs requiring a thesis. It shall be the policy of the Graduate School to give these examinations three weeks prior to the end of the final semester. The chairman of the major department or one appointed by him shall be chairman of the examining committee and be responsible for giving the examination. A student must pass other examinations required by his major department.

The matter for the examination shall be based primarily on the student's courses and, if he is a candidate for the Master of Arts or Master of Science degree, on his thesis. It is understood, however, that a candidate's general knowledge of his field must be found satisfactory by his examiners.

Thesis

The thesis required for the Master of Arts or Master of Science degree should embody the results of the applicant's research in some problem of his major subject, and must at each stage be under the direction of the chairman of the department or of one appointed by him.

Before beginning work on the thesis, the student should secure from the Graduate Office the form, Approval of Thesis Project, and also the instruction, Form and Mechanics for Writing Theses.

The student must submit three typed copies of his thesis after it has been formally approved.

Application for Degree

All students planning to complete requirements for graduate degrees must complete application forms for the Graduate Office within the first month of their final semester of work—summers, during the first two weeks.

Graduate Grading System

The following symbols are used in the evaluation of course work: A—indicative not only of high achievement, but also of an unusual degree of intellectual ability and initiative; B—above average attainment; C—work of minimum or average attainment; D—inferior, no graduate credit; F—failure. To obtain credit graduate students must do work of B quality in courses numbered 200 to 399, and of C quality in courses numbered 500 or higher.

Probation

One unsatisfactory grade (below C in courses in the 500-699-series, below B in courses in the 200-399-series) places a graduate student on probation; two such grades make him ineligible to reregister in a degree program.

Clearance of Incompletes

Grades of I (incomplete) must be cleared by a student within thirty days after the last day of the semester, unless the professor concerned specifies another date. After thirty days, the grade becomes a permanent I.

Dismissal

The Graduate School reserves the right to dismiss from any graduate degree program any student whose quality of classwork is beneath the standard set by the Graduate Council of the University.

Transfer Credits

Students may be granted up to six hours of advanced standing for graduate credit transferred from other universities and completed prior to admission to Xavier's Graduate School, *provided the work was not in extension*. Once a student is accepted by Xavier, he may, under certain circumstances, be given permission to take six hours of graduate work at another university: official permission must be obtained from Xavier. Only A or B work is acceptable for transfer. Course work must be done on the main campus of the other university.

Health Service

Full-time graduate students may choose to avail themselves of the University's Student Health Service at the student fee of \$10.00 per semester (fall and spring semesters only).

A student accident, sickness, and hospital insurance plan is available to full-time graduate students at a reasonable rate. Family policies are available to married students attending on a full-time basis.

Housing Arrangements

Graduate students usually make their own arrangements for obtaining housing accommodations. Dormitory accommodations are available to a limited number of male graduate students each semester, and generally available to all single graduate students, male and female, during the summer sessions. Assistance in obtaining off-campus accommodations may be obtained by writing the Director of Student Housing, Office of the Dean of Men.

Campus Parking

A limited amount of parking is available to graduate students on campus without charge. The Graduate School cannot guarantee a parking place as a condition of enrollment. Parking stickers, available without charge to graduate students who attend classes after 4 p.m. daily or on Saturday mornings, are required on cars parked on campus.

Facilities for Study and Research

Computer Center: The University Computer Center operates an I.B.M. 1620 type computer which is available to all faculty and students of the University for either classroom work or research involving statistical or mathematical analyses. Members of the Computer Center also provide consultation and advisory assistance to those wishing to use it in their work.

Library: The University Library (including the Milford Branch) has a rapidly growing collection of more than 160,672 volumes which is selected to serve as well as supplement the education and research programs of the University. To bring the major areas of knowledge in close proximity, the divisional library plan has been established. The divisions are Humanities, Social Science, and Science and Business. Each area is staffed by librarians who are specialists in their fields. Within these divisions the volumes are arranged by subject on open shelves so that the intellectually curious student may browse among them, unhampered by intervening walls and artificial barriers.

Numerous departments of the University maintain departmental collections within their own buildings.

The graduate student is further encouraged in his studies by having available to him individual study carrels. Students wishing to keep books in the library may obtain a locker on an assigned basis.

Center for Human Development: The newly created Center for Human Development is engaged in research studies in the areas of guidance, reading improvement, and Montessori education as well as other areas within the Departments of Psychology and of Education.

Veterans' Education

The Graduate School has been approved by the Veterans' Administration for educational training under all existing public laws. Requests for information should be addressed to The Director, Veterans' Education.

Foreign Student Advisor

The Graduate School's Foreign Student Advisor will assist international students with such problems as adjustment to University life, requirements of the Immigration Service, and social matters. The department chairman handles the student's academic problems.

Scholarships: Graduate School

Xavier University annually offers scholarships in all departments in which graduate programs are offered. These departments are business administration, classics, chemistry, economics, education, English, history-political science, mathematics, philosophy, and psychology. A number of scholarships may be awarded in each department by the Graduate Scholarship Committee on recommendation of the chairman of the department concerned. Scholarships will be awarded only to those who have demonstrated real academic excellence in their undergraduate work. Scholarships cover tuition only and are valued at \$1,050 each.

Awards will be subject to the following requirements and procedures:

1. Scholarships will be awarded only to students prepared to do full-time graduate study with the exception that partial scholarships may be awarded in classics.
2. Only students who meet fully departmental requirements as outlined in the University Catalogue should apply.
3. Applications should be made by letter addressed to the Dean of the Graduate School, Xavier University.
4. Transcripts of all previous college work should be forwarded to the Dean of the Graduate School (one from each college attended).
5. At least two letters from educators who can evaluate the academic qualifications of the applicant should be forwarded directly to the Dean of the Graduate School by the writers.
6. Applications, letters, and transcripts for scholarships must be in the Graduate Office not later than April 1 and applicants will be notified of the decision of the Graduate Scholarship Committee during May of the academic year prior to the award.

Assistantships

The Walter A. and George McDonald Fund, established in honor of Mr. and Mrs. Andrew J. McDonald, provides income from a gift of \$50,000 for a graduate assistant in the Department of Chemistry.

Graduate assistantships are awarded annually in the Departments of Business Administration, Chemistry, English, History, Mathematics, and Psychology. Assistants are expected to devote about half-time to graduate studies and about half-time to service in the department.

Letters of application should be addressed to the chairman of the department concerned. A complete transcript of the applicant's undergraduate record and letters of recommendation from the chairman of the applicant's undergraduate department and one other professor should be sent directly to the chairman of the department at Xavier University.

All letters of application, recommendation, and transcripts should be in the hands of the chairman concerned not later than April 1, and successful applicants will be notified ordinarily in April by the chairman concerned.

Lichter Foundation and Defense Act Loan Funds

Graduate students are eligible to participate in the Lichter Foundation Loan Fund after their first semester of residence. Amounts of loans from these funds are determined by the Committee on Scholarships on an individual basis.

Tuition and Fees

Matriculation (payable once)	\$10.00
Tuition (per credit hour—graduate)	40.00
Teachers and school administrators receive a special rate of	33.00
Laboratory science fee (per course per semester)	20.00
Laboratory science deposit (per course per semester—partially refundable)	10.00
Laboratory materials deposit for science thesis (payable once—partially refundable)	50.00
Miller Analogies Test	4.00
Binding of thesis	4.00
Graduation fee	25.00

Contingent Fees

Duplicate Transcript	1.00
Special Examination	\$5.00

Financial arrangements should be settled on the day of registration. Attendance at classes will not be permitted until financial arrangements have been made with the Bursar. A time payment plan is available. Consult the Bursar.

A \$3.00 service charge will be added to all accounts over \$250.00, and a \$1.00 service charge will be added to all other accounts.

This service charge will be deducted if full payment is made within one month of the first day of class in a given semester during the academic year or within ten days of the beginning of either summer session.

Withdrawal

Students who have officially registered for a class but decide to discontinue attendance, or students who wish to cancel registration before they have entered class *must withdraw officially by completing a withdrawal slip in the Graduate School office or by informing the office in writing of their intent.*

The same procedure applies when a student decides to drop one class to enter another.

The date appearing on the withdrawal slip or other written notice is used by the Graduate School to determine possible tuition charges or refunds. No refunds may be granted without official withdrawal in the Graduate School office. Ceasing to attend class or informing a professor of the intent to withdraw does not constitute official withdrawal.

Refunds

The following is the official interpretation of University refund policy as applied to students of the Graduate School:

1. A refund of *tuition (fees are not refundable)* may be claimed in the case of withdrawal or dismissal in the first weeks of a semester according to the schedule detailed below.

2. Computation of refunds will be based upon the *official date of withdrawal*, not the last class attended.
3. The official date of withdrawal is the date upon which the student notifies the Graduate Office of his withdrawal in writing.
4. Withdrawal of a student who has been permitted to make only a partial payment at registration is handled precisely as it would have been had he completed payment; *thus he may owe a balance even though he has withdrawn.*
5. Students who do not withdraw officially through the Graduate School office when they stop attending classes *are liable for the total tuition and fee charges for the semester or session.* Those who register, decide not to start to class, but do not withdraw officially through the Graduate School office *are also liable for the total tuition and fee charges for the semester or session.*

Schedule of Refunds, Academic Year

Refund

Before student's first class meets.....	100%
In first or second week from first day of semester.....	90%
In third or fourth week from first day of semester.....	80%
In fifth or sixth week from first day of semester.....	60%
In seventh or eighth week from first day of semester.....	40%
In ninth week from first day of semester.....	20%
After nine weeks from first day of semester.....	None

Schedule of Refunds, Summer Sessions

For summer refund schedule, substitute "day" for "week" in the schedule for the academic year. For refund purposes one summer evening class equates with two summer day classes (*e.g.* withdrawal after the second evening class places the student within the "third or fourth day from the first day of the semester" category on the day Summer Sessions refund schedule and allows an 80% refund). No refund for evening classes is given after five class meetings.

THE MASTER OF ARTS THE MASTER OF SCIENCE

The final goal of the M.A. and the M.S. programs is that the student may come to possess a specialized knowledge of his chosen field and an intelligent appreciation of its place in the wide panorama of human thought.

The degree of M.A. or M.S. is awarded to the candidate who has demonstrated a capacity for further study or teaching by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. An understanding of the relations of his subject to allied subjects and to the synthesis of Christian culture, which is the basis of Western civilization.
2. A comprehensive knowledge of the broad field of learning in which the degree is conferred.
3. A specialized knowledge of a portion of that field.
4. Proven ability to do research in the special field of study.

General Requirements

In accordance with the above objectives the general requirements for the degrees are respectively:

1. Completion of such undergraduate prerequisites as will give assurance of the candidate's general educational background. Satisfactory completion of the Miller Analogies Test.

2. A reading knowledge of a foreign language.
3. Completion of a program consisting of at least twenty-four hours of integrated classroom study within the student's chosen field, an acceptable thesis of a research character for which six graduate credit hours are registered for and awarded, and a reading knowledge of a foreign language; or at least thirty hours of integrated classroom study, a substantial research paper specifically accepted by the department to satisfy this requirement and, depending upon the specific department's requirement, a reading knowledge of a foreign language.
4. Completion of a final oral comprehensive examination, if a thesis is written, or a written examination if a thesis is not included in the program.

Specific Departmental Requirements

Within the general requirements, departments administering programs may add specific regulations. Candidates for degrees are urged to maintain close relationship with the chairmen of their particular departments.

THE MASTER OF ARTS—ECONOMICS

Normally the applicant will be expected to have had the following: six hours in Principles of Economics, three hours in Money and Banking or in monetary and fiscal theory, three hours in an intermediate theory course, and three hours of electives from the fields of labor, econometrics, and theoretical analysis, a total of fifteen hours of undergraduate prerequisites. If the applicant has not had these undergraduate courses, and yet gives evidence that he is qualified to pursue graduate study in economics, the Department of Economics at its discretion may allow the applicant to take these or equivalent courses at Xavier University or at some other accredited institution. In exceptional instances some of these prerequisites may be waived.

All applicants are required to take the Graduate Record Examination before being admitted to graduate studies in the Department of Economics. If the applicant has taken this examination previous to his application to the Graduate School of Xavier University, he must provide the Department of Economics with an official report of his score.

Thirty semester hours of graduate work are required of the applicant. Twenty-four of these hours are devoted to fulfilling course requirements, and the remaining six hours either to thesis requirements or to research seminars. Students may transfer up to six graduate credits from other institutions with approval of the department. With approval, students may take one or two upper-division undergraduate courses for graduate credit, provided they earn at least a grade of B and perform whatever added course requirements are assigned by the instructor. Certain graduate courses from other disciplines may be taken with the approval of the department.

Candidates for the Master of Arts in economics must either demonstrate a reading knowledge of a foreign language or pass an examination in the essentials of statistics and basic mathematics for economists. The candidate's choice must be approved by the department.

Courses in economics and in other disciplines provide the following concentrations: Financial Economics, Industrial Economics, Quantitative Methods, Labor Economics, Public Economics, and Regional-International Economics.

THE MASTER OF ARTS—ENGLISH

The candidate for the Master of Arts degree in English must give substantial proof of his proficiency in literary criticism and textual analysis. He must show an ability to do research and a thorough factual knowledge of the history of English and American literature. The Department of English expects that all candidates for the Master of Arts degree in English will spend considerable time on individual study, literary and textual analysis, and research in addition to the actual course work. The knowledge of an undergraduate English major is presumed to be had by every candidate for the Master of Arts in English. In addition, the ability to express oneself with mechanical accuracy and precision of idiom is demanded.

All candidates are urged to include a course in the history of the English language. Courses selected in the 200 to 399 level ought to complement their undergraduate work. Courses and seminars selected on the 500 to 699 level should build upon the undergraduate work that they have completed in English. Since backgrounds on the undergraduate level may vary, each applicant should work out a program with the Chairman of the Department before beginning his graduate work.

Students who envision the Master of Arts in English as a terminal degree are advised to elect a program consisting of thirty credit hours of course work and the writing of an extended research paper done in conjunction with a seminar. This research paper, properly bound, is to be filed with the Chairman, Department of English, no later than one month from the conclusion of the course during which the paper was written. At least half of the thirty hours must be in courses numbered 500 or higher, and at least two of the courses must be seminars.

Those preparing for further studies in English, especially toward the doctorate, are advised to elect a program consisting of twenty-four hours of course work and the writing of a thesis. At least one-half of the hours must be in courses numbered 500 or higher, and at least two of the courses must be seminars. The subject of the thesis must be approved by the Department's committee for the graduate program. The thesis, for which six hours of credit are awarded, must be written under the guidance of a member of the faculty and must demonstrate the student's ability to do scholarly research of high quality. This thesis must be read and approved by the director of the thesis and two other readers from the faculty.

Students must pass an examination in a modern foreign language before completing six hours of graduate English. A candidate whose seminar research paper or thesis is concerned with an aspect of medieval literature may, if he so chooses, substitute Latin. Candidates must score satisfactorily on the Miller Analogies Test, which is to be taken during the first semester of graduate work.

Applicants for the M.A. in English must also pass a written comprehensive examination in English and American literature, which ordinarily should not be taken until all class work has been completed. This examination, administered in the spring and in mid-summer, is taken in two sessions. The general rubrics for the examination are indicated in the *Guide for English Majors*, obtainable in the University Bookstore.

Admission

1. A 3.0 average in all English courses on the undergraduate level.
2. A minimum of thirty-six undergraduate credit hours in English which should include the survey of English literature from the Old English Period to the Twentieth Century; the survey of American Literature; at least one course in Shakespeare. Courses in aesthetics and literary criticism and in history of the English language are highly recommended. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.

3. Recommendations from members of the Department of English in the college or university where he did his undergraduate work. One of these recommendations should come from the chairman of the Department of English where the undergraduate work was completed.

Any student applying for admission to the program leading to the Master of Arts in English must complete the following procedures before registration:

1. Submit to the Graduate School the completed application form for admission to the Graduate School.
2. Submit to the Chairman, Department of English, the completed application for admission to the graduate program in English.
3. Arrange for transcript of previous college work to be sent to the Graduate School.
4. Submit to the Graduate School and to the Chairman, Department of English, his score on the Graduate Record Examination in Literature.
5. Arrange with the Chairman, Department of English, for a personal interview.

Part-time students may be admitted for their first semester of work prior to their personal interview. All admission procedures, however, must have been completed before the second registration.

THE MASTER OF ARTS—PHILOSOPHY

The Master's program aims at a high degree of the habit of philosophy, a penetrating grasp of systematic philosophy, an ability to formulate and analyze a problem and find a solution, a knowledge of the major philosophical positions propounded in the West, and the capacity to evaluate critically the thought of other philosophers.

The minimum requirements for the degree of Master of Arts in philosophy are:

1. Completion of twenty-four hours of work at the 500-699 level; or a minimum of twelve hours of such courses and twelve hours at the 300-399 level (or, by exception, at the 200-299 level). These must include surveys in three periods of the history of philosophy (Pl 250, 260, 270) if these have not been previously had.
2. A Master's thesis, Pl 699, six hours.
3. A comprehensive examination on course work and the thesis.

THE MASTER OF ARTS—PSYCHOLOGY

To insure comprehensiveness, all candidates must include in their program each of the following courses designed in their whole to provide integrated coverage of the graduate field of psychology. For description of courses see listings under the Department of Psychology.

- 263, THEORIES OF PERSONALITY I AND II. Four credit hours, two each semester.
- 501 CONTEMPORARY THEORY IN PSYCHOLOGY. Three credit hours.
- 502 SEMINAR: PHILOSOPHICAL ISSUES IN PSYCHOLOGY. Three credit hours.
- 505 PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour.
- 511 ADVANCED STATISTICS. Three credit hours.
- 521 ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours.

To insure the attainment of his particular objective in graduate study in psychology, the student must include a concentration in one of the following *areas of concentration*:

General-Experimental Psychology

A minimum of seven credit hours selected from the following courses: Biological Basis of Animal Behavior, Learning and Motivation, Design of Experiments, Research Problems in Psychology, Communication, Social Psychology, Differential Psychology, Psychological and Achievement Tests.

Clinical Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Psychopathology, Dynamic Psychology, Individual Tests of Intelligence, Counselling Principles and Techniques, Projective Techniques I and II, Research Problems in Psychology, Communication, Counselling and Psychotherapy, Remedial Reading. Practicum in Clinical Psychology is required.

Counselling Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Developmental Psychology, Dynamic Psychology, Vocational and Educational Guidance, Psychological and Achievement Tests, Counselling Principles and Techniques, Individual Tests of Intelligence, Communication, Remedial Reading. Practicum in Counselling is required.

Industrial Psychology

A minimum of thirteen credit hours selected from the following courses: Occupational Information and Job Analysis, Marketing Research, Personnel Selection and Evaluation Techniques, Communication, Design of Experiments, Dynamic Psychology, Learning and Motivation. Practicum in Industrial Psychology is required.

As a climax to his program, each student must register for Ps 699, Master's thesis, six credit hours. He will prepare an acceptable thesis, which he will defend in his final oral examination.

Requirements

Depending on the student's concentration, a minimum of thirty-six graduate hours is required for the Master of Arts in psychology. These shall ordinarily be distributed as follows:

1. Seventeen credit hours in the core courses.
2. Seven or thirteen hours in the area of concentration.
3. Six hours awarded for Master's thesis.

The Master of Arts in psychology will be awarded only to candidates *who have demonstrated a reading knowledge of a foreign language* and, in a final oral examination, have both successfully defended their thesis and successfully demonstrated their knowledge of the general field of psychology.

Admission

1. A 3.0 average in all psychology courses.
2. A minimum of eighteen undergraduate credit hours in psychology which should include experimental psychology (with laboratory), introductory statistics, psychology of personality, and/or abnormal psychology. Courses in biological science and college mathematics are recommended as a preparation for graduate studies. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
3. Personality and character traits which are in agreement with ethical standards of psychology.

Full-time students must complete the following procedures in advance of registration:

1. Submit to the Graduate Office the completed application form for admission to the Graduate School and special application form for admission to the department of psychology.
2. Submit transcript of previous college work.
3. Submit to the Graduate Office report of M.A.T. score or arrange with the Department of Psychology for examination.
4. Arrange with the Psychology Department for a personal interview. (The interviewing of students from considerable distance may be delegated to a local psychologist by special arrangement.)
5. The Dean of the Graduate School will notify the applicant of official acceptance.

Part-time students may be admitted as special students for their first semester of work prior to M.A.T. results and personal interview. All admission procedures, however, must have been completed prior to their second registration.

THE MASTER OF SCIENCE—CHEMISTRY

The M.S. in chemistry is designed to prepare students for continuing their graduate studies to the doctoral level, or for employment in the more specialized areas of chemical industry.

For entrance into the graduate program in chemistry, the applicant should have had undergraduate training in chemistry substantially equivalent to a Xavier undergraduate major.

Undergraduate prerequisites also include mathematics through calculus and a year of physics (eight credit hours). A student seriously deficient in these prerequisites will be required to make up the deficiency prior to, or concurrent with, his graduate studies.

All candidates for the degree of Master of Science in chemistry must complete the following nine courses. These are offered on a two-year cycle, but the program can be entered in any semester (excluding summer). The sequence of courses is described in the chemistry department brochure. For descriptions of the courses see listings under the Department of Chemistry.

- 525 THERMODYNAMICS. Two credit hours.
- 530 CHEMICAL KINETICS. Two credit hours.
- 535 THE CHEMICAL BOND. Two credit hours.
- 550 ORGANIC STEREOCHEMISTRY. Two credit hours.
- 590 REACTION MECHANISMS. Three credit hours.

- 610 STRUCTURAL INORGANIC CHEMISTRY. Two credit hours.
 660 CHEMICAL SEPARATIONS. Two credit hours.
 670 CHEMICAL MEASUREMENT. Two credit hours.
 680 INSTRUMENTAL METHODS. One or two credit hours.

In addition to the above block of required courses, the graduate student selects from available optional courses sufficient offerings such that his total number of credits in course work totals at least twenty-four. With the permission of the Chairman of the Department, one 300 level course may be included.

In his selection, the student is guided by the department chairman, or, after selection of his research topic, by his research advisor. Among the optional courses which are offered regularly are the following:

- 320 INTRODUCTION TO RADIOCHEMISTRY. Two credit hours.
 370 BIOCHEMISTRY. Three credit hours.
 538 INTRODUCTION TO VIBRATIONAL SPECTROSCOPY. Two credit hours.
 555 HETEROCYCLIC ORGANIC CHEMISTRY. Two credit hours.
 595 ORGANOMETALLIC CHEMISTRY. Two credit hours.
 630 ADVANCED BIOCHEMISTRY. Two credit hours.
 640 MEDICINAL CHEMISTRY. Two credit hours.
 690 SPECIAL TOPICS. Two credit hours each semester.
 692 SPECIAL STUDY. One credit hour each semester.

A minimum of thirty hours is required for the degree of Master of Science in Chemistry. These shall ordinarily be distributed as follows:

1. Eighteen credit hours in the nine required graduate chemistry courses specified in the previous section.
2. Sufficient credit hours in optional courses such that the total number of course hours is at least twenty-four. With the permission of the Chairman of the Department, one 300 level course in chemistry and certain 300 or higher level courses in mathematics and physics may be included.
3. Six hours of credit obtained through the satisfactory completion of a Master's research problem (Ch 699), submission of a written thesis, and the passing of an oral examination on the contents of the thesis.
4. The satisfactory completion of a written examination in a scientific modern language (chemical German, Russian, or French).
5. For full-time students, enrollment in Ch 500: Graduate Chemistry Seminar, each semester of attendance. Part-time students are encouraged to attend the seminar whenever their schedules permit.

All degree students must present at the time of registration a schedule of courses to be taken which has been approved by the Chairman of the Chemistry Department or the student's thesis advisor.

Non-degree students are encouraged to consult with the Chairman of the Chemistry Department prior to registration to determine if they possess the proper prerequisites for the course(s) of interest.

THE MASTER OF SCIENCE—MATHEMATICS

The programs of studies leading to a Master of Science in mathematics are designed to allow the students to specialize in theoretical mathematics, in general applied mathematics, or in a particular area in applied mathematics. The concentrations available are Operations Research, Physics-Engineering, and Probability-Statistics.

Courses are offered primarily in the late afternoon and evening to accommodate part-time as well as full-time students.

For those who cannot attend during the academic year, requirements for the degree may be completed during summer sessions. Courses will be offered in a five-summer cycle, and will cover material useful in teaching mathematics in high school or college.

Prerequisites and Required Courses

Before being admitted to the program, students must have completed the equivalent of at least six semester hours of Advanced Calculus-Differential Equations. In addition, there is a basic set of courses required for the Master of Science in Mathematics. These are:

- 240 MATRICES AND VECTOR SPACES. Three credit hours.
 260 ELEMENTARY TOPOLOGY. Three credit hours.
 270 INTERMEDIATE ANALYSIS. Three credit hours.
 280 INTRODUCTION TO COMPLEX VARIABLES. Three credit hours.

These courses must be completed as soon as possible. They are required for graduation and are prerequisites for many courses in the program. The consent of the Chairman of the Department of Mathematics is necessary for any of these courses to be applied toward the graduate requirements for the degree. In general, at most two of the courses will be applicable. (Students with an extensive undergraduate mathematics background might apply more than two of these required courses toward the Master's degree requirements.)

As soon as possible after admission to the Graduate School, the student should choose an advisor. Upon completing six graduate credit hours at Xavier, he must apply for candidacy. At that time he should submit a program of courses to his advisor and indicate whether or not his program will include a thesis.

The specialization in theoretical or applied mathematics is specified by the student's choice of a comprehensive examination given in two parts. Part I, common to all areas of concentration, is based on material from the four basic required courses, Mt 240, 260, 270, 280. Part II is directly related to the student's field of specialization. He may choose to take this part of the comprehensive examination in one of the following areas:

1. Theoretical Mathematics
2. General Applied Mathematics
3. Operations Research
4. Physics-Engineering
5. Probability-Statistics

A detailed description of the material to be covered may be obtained from the Mathematics Department.

These courses are offered regularly in the various areas of concentration:

Theoretical Mathematics

- 250 INTRODUCTION TO MODERN ALGEBRA . .
 510, 520 GENERAL TOPOLOGY I, II
 540, 550 ABSTRACT ALGEBRA I, II
 560, 570 REAL ANALYSIS I, II
 580, 590 COMPLEX ANALYSIS I, II

General Applied Mathematics

Courses may be taken from any of the areas of concentration or from the general Applied Mathematics offerings listed below.

- 213 COMPUTATIONAL MATHEMATICS
 303, 313 NUMERICAL ANALYSIS I, II
 343 NUMERICAL LINEAR ALGEBRA
 353 NUMERICAL METHODS OF NON-LINEAR SYSTEMS

Operations Research

- 302 OPERATIONS RESEARCH
 342 LINEAR PROGRAMMING
 602, 612 ADVANCED OPERATIONS RESEARCH I, II
 642, 652 ADVANCED OPTIMIZATION TECHNIQUES I, II

Physics-Engineering

- 304, 604 PARTIAL DIFFERENTIAL EQUATIONS I, II
 314, 614 ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I, II
 344, 644 VECTOR AND TENSOR ANALYSIS I, II
 624 INTEGRAL EQUATIONS
 634 CALCULUS OF VARIATIONS

Probability-Statistics

- 201, 211 MATHEMATICAL STATISTICS I, II
 611 DESIGN OF EXPERIMENTS
 621 APPLIED REGRESSION ANALYSIS
 631 STOCHASTIC PROCESSES
 641 STATISTICAL DECISION THEORY

A student need not complete all the courses offered in his area of concentration, but he should take a sufficient number to be prepared for the comprehensive examination in it. With the exception of the four basic required courses, this is the only condition imposed on selection of courses.

THE MASTER OF SCIENCE—PHYSICS

Prospective graduate students in physics must ordinarily submit evidence of a baccalaureate degree and a satisfactory performance record in undergraduate physics and mathematics courses comparable with those taken by a physics major at Xavier University.

The Chairman of the Physics Department, or an advisor designated by him, should be consulted by each full-time student before registration and by each part-time student before completing his first six hours of work. The student should secure a precise statement concerning any undergraduate deficiencies at that time. His schedule for each subsequent registration must be approved in advance in writing by his advisor.

Requirements

Students may elect to fulfill requirements for the Master of Science in physics with or without thesis. There is no modern language requirement.

The distinctive nature of the Xavier graduate program in theoretical physics requires that all students elect at least two of the following principal courses (twelve graduate credit hours). For descriptions of courses see listings under the Department of Physics.

- 501, 502 CLASSICAL MECHANICS. Six credit hours.
 511, 512 RELATIVISTIC ELECTRODYNAMICS. Six credit hours.
 521, 522 QUANTUM MECHANICS. Six credit hours.
 531, 532 PHYSICAL OPTICS. Six credit hours.

Additional hours, upon approval of the student's advisor, will be selected from other courses in physics or from supporting courses offered by other departments such as Mathematics, Chemistry, or Biology.

THE MASTER OF EDUCATION

The Master of Education, a professional degree, is designed to meet the needs of teachers and school administrators actually engaged in school work. It has one basic aim: stimulating better teaching wherever the influence of the successful candidate may extend, whether it be in an individual classroom, an entire school, or a whole school system.

Accordingly, this degree is awarded to the candidate who has demonstrated a capacity for improving the quality of teaching within the particular sphere of his influence by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. Broad knowledge of the principles and techniques of education in modern society.
2. Specific knowledge of one major area of the field of education.
3. Essential understandings and skills necessary for intelligent consumption of educational research.

Requirements for the degree of Master of Education are specified with certain basic considerations in mind:

1. Sufficient flexibility is necessary to care adequately for the particular needs of the in-service educator who enrolls for the degree.
2. Graduate programs must be so planned as to insure the student's attaining a comprehensive knowledge of professional theory and practice in the principal areas of the field; a detailed knowledge of at least one major area of specialization—for high school teachers this area may be an appropriate academic field; and capability in the skills and knowledge necessary for intelligent comprehension and use of educational research.

To insure comprehensiveness in their programs for the degree of Master of Education, all candidates must include in their programs each of four general survey courses designed, in their whole, to provide integrated coverage of the broad field of education. These courses are:

- 501 PHILOSOPHY OF EDUCATION. Three credit hours.
- 503 EDUCATIONAL PSYCHOLOGY. Three credit hours.
- 505 EDUCATIONAL ADMINISTRATION. Three credit hours.
- 507 EDUCATIONAL RESEARCH. Three (two/one) credit hours.

To insure their mastery of a particular area of education, candidates must include in their programs a concentration of at least twelve credit hours in one of the following *areas of concentration*:

Administration, guidance, school psychology, elementary education, secondary education, physical education, the emotionally disturbed child, Montessori education, instructional systems specialist, research specialist, reading specialist, biology, business, chemistry, classics, communication arts, English, history-political science, mathematics, French, German, Spanish, philosophy, physics, theology and music.

Those interested in the M. Ed. program may obtain brochures covering specifics of concentrations from the Graduate School office. Separate folders are available for concentrations in Montessori education, research specialist, and instructional systems specialist.

A minimum of thirty hours is required for the degree of Master of Education. These shall be distributed as follows:

- 1. General surveys in education, twelve credit hours.
- 2. Concentration, twelve credit hours.
- 3. Pertinent electives, six credit hours.

The degree will be awarded only to candidates who have passed an extensive written examination on the general field of education covered by the four survey courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration is a professional degree designed to meet the needs of persons in industry for training which will ready them for increasing executive responsibilities.

Accordingly this degree is awarded to the candidate who has demonstrated capacity for leadership in the field of business by satisfactorily completing a graduate program designed to give him the following characteristics:

- 1. Broad knowledge of the principles and techniques of business administration.
- 2. Specific knowledge of one of the major phases of business administration.
- 3. Essential understandings and skills necessary for intelligent consumption of research in the fields of business.

Students may be admitted to graduate work in business administration on any of these bases:

- 1. Undergraduate degree in business administration.

- 2. Undergraduate non-business degree, plus at least two full years of business experience, and eighteen hours of course work in business subjects including accounting, economics, marketing, statistics, finance, and quantitative analysis. Undergraduate deficiencies may be removed by completing BA 501: Basic Economics (four credit hours); BA 502: Introduction to Quantitative Methods (two credit hours); BA 503: Basic Accounting (four credit hours); BA 505: Basic Marketing (two credit hours); BA 506: Basic Statistics (two credit hours); BA 507: Basic Finance (two credit hours) or their equivalents, as appropriate. These are special courses open only to graduate students with undergraduate deficiencies.
- 3. Undergraduate non-business degree with at least thirty hours of business and economics subjects. Deficiencies may be removed by an extended graduate program including BA 501, 502, 503, 505, 506, and 507 (sixteen graduate hours as shown) and two additional hours as advised in individual cases.

To insure comprehensiveness in their programs for the degree of Master of Business Administration, all candidates must include in their programs each of four general survey courses designed in their whole to provide integrated coverage of the broad business field. These courses are:

- 511 ECONOMICS OF BUSINESS. Three credit hours.
- 512 QUANTITATIVE BUSINESS METHODS. Three credit hours.

The degree will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the five core courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION— HOSPITAL ADMINISTRATION

The Master of Business Administration with a concentration in Hospital Administration is awarded the candidate who has followed a program of studies designed to give him a background in two areas: first, in the principles and techniques used in the administration of businesses in general; and second, in those principles and techniques particularly applicable to the administration of hospitals.

To accomplish the first objective, the candidate must include in his program the following three core courses required of all students for the degree of Master of Business Administration, with concentration in Hospital Administration. For course descriptions see Business Administration.

- 511 ECONOMICS OF BUSINESS. Three credit hours.
- 514 ADMINISTRATIVE OPERATION. Three credit hours.
- 519 RESEARCH IN BUSINESS. Three credit hours.

To accomplish the second objective, the candidate must include courses designed to acquaint him specifically with the field of hospital administration. The following courses, more than three-quarters of his program, are designed as nine individual three credit-hour courses during the academic year:

- 630 HOSPITAL ORGANIZATIONAL THEORY. Three credit hours.
- 631 HOSPITAL SYSTEMS MANAGEMENT. Three credit hours.
- 632 COMPREHENSIVE HEALTH PLANNING. Three credit hours.
- 633 HOSPITAL FINANCIAL MANAGEMENT. Three credit hours.

- 634 HOSPITAL LEGAL ASPECTS. Three credit hour.
 636 HOSPITAL PERSONNEL ADMINISTRATION. Three credit hours.
 637 SEMINAR: MEDICAL SERVICES ADMINISTRATION. Three credit hours.
 638 COMMUNITY HEALTH PROBLEMS. Three credit hours.
 639 MEDICAL CARE ADMINISTRATION. Three credit hours.

Administrative Residency Year

- 513 MANAGERIAL ACCOUNTING. Three credit hours.
 514 ADMINISTRATIVE OPERATION. Three credit hours.
 515 MARKETING THEORY AND PRACTICE. Three credit hours.
 649 ADMINISTRATIVE RESIDENCY (12 months). Nine credit hours.

To insure their mastery of a particular area of business administration, candidates will ordinarily include in their programs a concentration of at least nine credit hours in one of the following *areas of concentration*:

Accounting	Advanced Business Economics
Personnel	Quantitative Methods
Management	Hospital Administration
Marketing	

As a climax to his program, the candidate must include the conference-type seminar, BA 699. This will assist him in marshalling his knowledge of the business field in the solution of specific problems. A student must have at least eighteen graduate hours before taking this course.

A minimum of thirty graduate hours is required for the M.B.A. These shall ordinarily be distributed as follows:

1. Fifteen hours in the five core areas.
2. At least nine hours in a functional area of concentration.
3. Three hours in Seminar: Business Administration Problems.
4. Business electives.

Before receiving the degree of Master of Business Administration with concentration in Hospital Administration, all students must complete a calendar year of administrative residency in a hospital, unless specifically exempted in writing by the Director of the Hospital Administration program. Exception will be made only when the student evidences equivalent experience prior to enrolling in the degree program. While a student will ordinarily receive compensation from the hospital in which he serves his residency, a residency fee of \$360 is charged by the University to cover expenses of University administration of the program. This is the normal charge for nine graduate credit hours.

A minimum of thirty-six graduate hours plus the completion of the residency requirement is required for the degree of Master of Business Administration. These shall ordinarily be distributed as follows:

1. Nine credit hours in three general surveys.
2. At least twenty-seven credit hours in the area of hospital administration, exclusive of Basic Accounting, Basic Economics, or Basic Statistics.

NOTE: A Journal Club requirement includes an outside reading program and a seminar discussion program of current hospital problems.

The Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the three survey courses and the individual area of concentration.

Students may be admitted to graduate degree work in hospital administration on either of the two following bases:

1. Undergraduate degree which includes at least twenty-one hours of study in business subjects including six credit hours in accounting, three credit hours in statistics and six credit hours in economics.
2. Undergraduate degree, at least two full years of hospital or general business experience and course work as follows: six credit hours in accounting, three credit hours in statistics, and six credit hours in economics.

NOTE—Undergraduate deficiencies may be removed by completing:

- BA 501 BASIC ECONOMICS. Four credit hours.
 BA 503 BASIC ACCOUNTING. Four credit hours.
 BA 506 BASIC STATISTICS. Two credit hours.

—The above special graduate courses are not to be counted in the minimum of thirty-six graduate hours required for the degree.

Certificate in Hospital Administration

The Certificate Program is designed for those students who do not qualify for a degree, but by virtue of their experience in hospital administration have the ability to absorb advanced study. The Certificate Program may be taken during the academic year or during the summer terms. A minimum of eighteen hours of study is required for the Certificate in Hospital Administration.

Chronicle

Presidents

<i>Year</i>	<i>President</i>	<i>Year</i>	<i>President</i>
1831-34	Rev. James I. Mullan.	1881-84	Rev. John I. Coghlan, S.J.
1834-40	Most Rev. John Baptist Purcell.	1884-85	Rev. Henry Moeller, S.J.
1840-47	Rev. J. A. Elet, S.J.	1885-87	Rev. Edward A. Higgins, S.J.
1847-48	Rev. J. E. Blox, S.J.	1887-93	Rev. Henry Schapman, S.J.
1848-51	Rev. J. De Blieck, S.J.	1893-96	Rev. A. J. Burrowes, S.J.
1851-53	Rev. George A. Carrell, S.J.	1896-1900	Rev. Michael J. O'Connor, S.J.
1853-56	Rev. I. Boudreaux, S.J.	1900-07	Rev. Albert A. Dierckes, S.J.
1856-61	Rev. M. Oakley, S.J.	1907-11	Rev. Joseph Grimmelsman, S.J.
1861-65	Rev. John Schultz, S.J.	1911-16	Rev. Francis Heiermann, S.J.
1865-69	Rev. W. H. Hill, S.J.	1916-22	Rev. James McCabe, S.J.
1869-71	Rev. Thomas O'Neil, S.J.	1922-30	Rev. Hubert F. Brockman, S.J.
1871-74	Rev. Leopold Bushart, S.J.	1930-34	Rev. Hugo F. Sloctemyer, S.J.
1874-78	Rev. Edward A. Higgins, S.J.	1934-40	Rev. Dennis F. Burns, S.J.
1878-79	Rev. Thomas O'Neil, S.J.	1940-49	Rev. Celestin J. Steiner, S.J.
1879-81	Rev. R. J. Meyer, S.J.	1949-55	Rev. James F. Maguire, S.J.
1955-	Rev. Paul L. O'Connor, S.J.		

Intercollegiate Latin Contest, 1968

David R. Winter, Second Place

The Washington Oratorical Medal, Gift of the Alumni Association, 1968

Gregory R. Burwinkel

The Verkamp Debate Medal, Founded by Joseph B. Verkamp, '77, 1968

Robert J. Thesing

Jesuit Educational Association Colleges and Universities

Alabama

Spring Hill College, Mobile 36608

California

Loyola University, Los Angeles 90045
University of Santa Clara, Santa Clara 95053
University of San Francisco, San Francisco 94117

Colorado

Regis College, Denver 80221

Connecticut

Fairfield University, Fairfield 06430

District of Columbia

Georgetown University, Washington 20007

Illinois

Loyola University, Chicago 60626

Louisiana

Loyola University, New Orleans 70118

Maryland

Loyola College, Baltimore 21210

Massachusetts

Boston College, Boston 02167
Holy Cross College, Worcester 01610

Michigan

University of Detroit, Detroit 48221

Missouri

Rockhurst College, Kansas City 64110
St. Louis University, St. Louis 63103

Nebraska

The Creighton University, Omaha 68131

New Jersey

St. Peter's College, Jersey City 07306

New York

Canisius College, Buffalo 14208
Fordham University, Bronx 10458
Le Moyne College, Syracuse 13214

Ohio

John Carroll University, Cleveland 44118
Xavier University, Cincinnati 45207

Pennsylvania

St. Joseph's College, Philadelphia 19131
University of Scranton, Scranton 18510

Washington

Gonzaga University, Spokane 99202
Seattle University, Seattle 98122

West Virginia

Wheeling College, Wheeling 26003

Wisconsin

Marquette University, Milwaukee 53233

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Wills and Bequests

Through the years, friends of Xavier University, by designating the University in their last wills, have expressed their appreciation for the devoted service and notable contributions made by the University.

Through a will, a friend of Xavier University can provide that the causes and ideals he or she has cherished in life will continue to enjoy support.

Gifts to the University may take the form of scholarships, of professorships, of additions to the material equipment, or of contributions to the permanent endowment fund. Special conditions may, of course, be attached to any gift.

Listed below is a Bequest Form which may be used to designate Xavier University in your will.

FORM OF BEQUEST

I, _____ hereby give, bequeath and devise to Xavier University, an institution incorporated under the laws of the State of Ohio, and located in Cincinnati, Ohio, the following:

for the uses and purposes of the said Corporation.

(Signed) _____

(Date) _____

Witnesses:

"It is a bad will that has not the name of Our Lord among the heirs."—
Cardinal Manning.

NOTES

1. The first part of the report is a summary of the work done during the last year.

2. The second part is a detailed account of the experiments carried out.

3. The third part is a discussion of the results obtained and a comparison with the results of other workers in the field. It is found that the results obtained in this work are in good agreement with those of other workers, and that the method used in this work is a reliable one for the determination of the rate of reaction.

4. The fourth part is a conclusion of the work done during the last year.

5. The fifth part is a list of references.

6. The sixth part is a list of symbols used in the report.

NOTES

